DOCUMENT RESUME

ED 270 080 IR 012 081

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TITLE	Evaluation of the TSC Dolphin Computer Assisted Instructional System in the Chapter 1 Program of the District of Columbia Public Schools. Final Report 85-9.
INSTITUTION	Human Resources Research Organization, Alexandria, Va.
SPONS AGENCY	Houghton Mifflin Co., Boston, MA.
REPORT NO	HumRRO-FR-PRD-85-9
PUB DATE	Oct 85
NOTE	138p.
PUB TYPE	Reports - Evaluative/Feasibility (142) -- Tests/Evaluation Instruments (160)
EDRS PRICE	MF01/PC06 Plus Postage.
DESCRIPTORS	*Academic Achievement; *Attitude Measures; Comparative Analysis; *Computer Assisted Instruction; Elementary Secondary Education; *Instructional Effectiveness; Instructional Innovation; *Intermode Differences; Mathematics Instruction; Questionnaires; Reading Instruction; Research Methodology; *Student Attitudes; Tables (Data); Teacher Attitudes
IDENTIFIERS	District of Columbia; *Education Consolidation Improvement Act Chapter 1

ABSTRACT

Dolphin is a computer-assisted instruction system used to teach and reinforce skills in reading, language arts, and mathematics. An evaluation of this system was conducted to provide information to TSC Division of Houghton Mifflin regarding its effectiveness and possible modifications to the system. The general design of the evaluation was to compare Dolphin and non-Dolphin schools on a comprehensive set of Chapter 1 program effectiveness measures, including the achievement gains of Dolphin and non-Dolphin schools using school year (SY) 1982-83 standardized test results as the pretest and SY 1984-85 results as the posttest. Study participants included Chapter 1 teachers and students in grades 4, 5, and 6, as well as principals, regular classroom teachers from grades 4, 5, and 6, and instructional aides in Chapter 1 schools. Questionnaires were developed for each group. Items for the adult populations were designed to provide data for comparing Dolphin and non-Dolphin schools and their Chapter 1 programs, and participants' opinions on Dolphin features and implementation. The student questionnaires were designed to provide attitudinal measures for comparison between Dolphin and non-Dolphin students. Results indicate that the Dolphin schools rated higher than the non-Dolphin schools on all criteria from the questionnaires, the test scores, the student records, and classroom observations. In addition, the presence of Dolphin is related to measures of areas that educators traditionally consider important to the learning process, i.e., student attitudes toward school and continuing education; teacher attitudes toward students; and student, teacher, and principal beliefs that learning is occurring. Appendices include the data collection instruments, a discussion of the statistical analysis methods used, and participant responses to open-ended questions. (JB)

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Acknowledgements

The authors would like to express appreciation to the many people whose assistance helped this project reach completion.

District of Columbia Public Schools	Chapter 1: Mrs. Anne Pitts, Dr. Judine Johnson, Dr. Barbara Simpkins, Ms. Gloria Browner, Ms. Barbara Wells, Ms. Margie Thomas, Mrs. Dorothy Christian, Mrs. Roberta Walker, Dr. Phyllis Hobson, , the people from district and regional offices who provided background information, and all of the school principals, teachers, aides, and students who graciously allowed the data collection Division of Quality Assurance: Ms. June Bland, Mr. Herman Cobb, Ms. Stella Gomes, and Dr. Valeria Ford Division of Information Resource Management: Mr. Henry Thompson and Ms. Marcia Ivkovich
TSC® Division of Houghton Mifflin	Mr. John Schram, Ms. Sandra Davis, Ms. Jacqueline Redmond, Mr. Randall Lowe, and Mr. Jack Williamson Consultant: Dr. Steven Frankel
CTB/McGraw-Hill	Mr. Larry Slayton and Mr. Gerald Ward
Commonwealth of Virginia, Department of Education	Mr. John Foley
George Washington University	Dr. Philip Wirtz, Mr. Michael Chicherio, and Mr. John Ferguson
HumRRO	Ms. Jane Heisey, Ms. Arti Nigam, Mr. Thomas Bonczar, Ms. Judy Pumphrey, Ms. Emma King, Ms. Lisa Parrotte, Mr. Larry King, Ms. Susan Brougher, Ms. Nancy Huffman, Mr. Jack McKay, Mr. James Harris, Mr. William Osborn, and Dr. Mazie Knerr Consultants: Ms. Mona Hippolitus, Ms. Christine Phillips, Ms. Sheila Robinson, Ms. Anne Tobin, Mr. Walt Williams, and Dr. Karen Mitchell

Executive Summary

Purpose

Dolphin is a computer-assisted instruction system used in selected schools in the Chapter 1 program of the District of Columbia Public Schools (DCPS). Installation of the Dolphin equipment began in the middle of the 1983-84 school year (SY). The system teaches and reinforces skills in reading, language arts, and mathematics. An evaluation was conducted to provide information to TSC® Division of Houghton Mifflin regarding Dolphin effectiveness and possible modifications to the system. The evaluation also was to help the DCPS Chapter 1 program to decide about the continued and possibly extended use of the Dolphin system.

Method

The general design of the evaluation was to compare Dolphin and non-Dolphin schools on a comprehensive set of Chapter 1 program effectiveness measures. A principal measure was the achievement gains of Dolphin and non-Dolphin students, using SY 1982-83 standardized test results as the pretest and SY 84-85 results as the posttest. Data were collected also on attitudes and opinions about both the Dolphin system and the implementation of the system in DCPS.

Questions were developed and data collected for each of the five categories of study participants. Categories of study participants included:

1. Chapter 1 teachers,
2. Chapter 1 school principals,
3. Chapter 1 school regular classroom teachers from grades four, five, and six,
4. Chapter 1 instructional aides, and
5. Chapter 1 students in grades four, five, and six.

The data were analyzed to determine whether enhanced Chapter 1 program effectiveness was associated with the presence or absence of Dolphin. Five major steps comprised the analyses.

These steps were:

1. Select 18 dependent variables (the project criterion measures).

   Student Questionnaire
   - Learns about math with Dolphin/equipment
   - Learns about reading with Dolphin/equipment
   - Would like to be in similar Chapter 1 program
   - Wants to go to college after high school
   - Would like to have a job using a computer
   - Likes coming to school

   Student Records
   - Reading gain score
   - Math gain score
   - Teacher assessment of student interest in reading and math
   - Number of days student absence during current semester

   Regular Teacher Questionnaire
   - Impact of Chapter 1 program on students' reading and math skills and on behavior
   - Assessment of frequency non-Chapter 1 students express desire to be part of Chapter 1

   Chapter 1 Teacher Questionnaires
   - Impact of Chapter 1 program on students' reading and math skills and on behavior
   - Ranking of contribution of CAI/Instructional Media Component to student interest in learning, career awareness, and actual student learning
   - Ranking of CAI/Instructional Media Component based on students' comments about liking

   Principal Questionnaire
   - Satisfaction with areas of the Chapter 1 program
   - Satisfaction with teaching effectiveness of Chapter 1 staff

   Observation Checklist
   - Data Collector rating of Chapter 1 period as a learning experience

2. Compare Dolphin and non-Dolphin schools on measures related to Chapter 1 program effectiveness.
3. Identify "control" and "process" variables.
4. Perform stepwise multiple regression on the dependent variables, with the control and process variables introduced selectively.
5. Determine significance of criterion mean differences between Dolphin and non-Dolphin schools.

Results

All 18 dependent measures were higher for Dolphin than for non-Dolphin schools. Significant differences between the groups were found for students' rating of their learning about reading with Dolphin, wanting to continue in Chapter 1, and liking to go to school. A measure of student interest in reading and math obtained from student records also was significantly higher. The regular teachers' perception of Chapter 1 impact on student skills and behavior, and their assessment of non-Chapter 1 students who express a desire to be part of that program also were significantly higher in Dolphin schools. A significant difference was found on the Chapter 1 teachers' ranking of students' liking of the CAI(Dolphin) versus the Instructional Media(non-Dolphin) components of the Learning Tripod. Dolphin school principals rated their satisfaction with the teaching effectiveness of their Chapter 1 staff significantly higher than the non-Dolphin principals. Data

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collectors' (observers) overall rating of the Chapter 1 classroom learning experience and environment was significantly higher in Dolphin schools. Comparisons between Dolphin and non-Dolphin groups within any participant category tended to indicate more positive opinions and attitudes among Dolphin groups. While no statistically significant differences were found in student gain scores in reading and mathematics, those students using Dolphin did as well as those not using Dolphin, and additionally, were higher on all other measures..

Chapter 1 Dolphin teachers and aides generally expressed very positive reactions toward Dolphin features and uses in the Chapter 1 program. Their opinions about hard copy resource materials were only slightly less positive.

Four of the five adult respondent groups had high proportions for agreement and strong agreement that students can learn what they need to know with a computerized method of instruction and that they would prefer to work in a school with computer-assisted instruction. Dolphin teachers gave strong positive reactions to the use of Dolphin with other groups of students from grade three through high school; principals' reactions were moderately positive.

Conclusions and Recommendations

The major question addressed in this evaluation was whether Dolphin, as it currently exists, is related to higher Chapter 1 program performance. The evidence, as noted in the previous section, indicates that Dolphin is related to higher Chapter 1 program performance. Few evaluations of this type are able to report that every criterion variable measured by the study is equal to or higher for the treatment group in contrast to the comparison group. Yet, that is what the results indicate. On all criteria from the questionnaires, the test scores, the student records, and the classroom observers, Dolphin rated higher than the comparison. Although not all differences were statistically significant, the fact that all pointed in the direction of Dolphin's superiority should not be discounted. The results indicate that the presence of Dolphin is related to measures of areas that educators traditionally consider important to the learning process: student attitude toward school and continuing education; teacher attitude toward students; and student, teacher, and principal beliefs that learning is occurring.

Responses of Dolphin teachers and aides suggest that the Dolphin system might be more effective with a system flexibility tailored to local requirements, or, perhaps teachers and aides need better training in how to use the flexibility already in the system. Areas in which greater flexibility is needed include curriculum materials, teacher reports, correlations with local objectives, and mix of application software.

The study's results indicate that DCPS should consider adding Dolphin systems to the remainder of the Chapter 1 schools. Also, consideration could be given to providing systems to some non-Chapter 1 schools on an experimental basis.

Whether purchased for Chapter 1 or non-Chapter 1 use, DCPS might derive additional benefits from its Dolphin equipment by using it for more than six hours a day. After-school remedial and enrichment programs for Chapter 1 and non-Chapter 1 students should be considered to meet differing ability levels. Also, evening adult basic education programs may be usefully adapted to Dolphin, as may be school management applications run on a "third shift" basis. The use of additional software applications would run most effectively on an expanded system which would allow Dolphin to proceed under its own sophisticated operating system.

To better assess the degree to which Dolphin can positively affect test scores, further research is needed in which some of the problems of the present methodology can be overcome, such as: a more careful tracking of Dolphin and non-Dolphin students to ensure that those in the study do not move from one treatment to the other, longer student time at the terminals, and comparison to alternative computer-based instructional approaches.

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Evaluation of the TSC® Dolphin Computer Assisted Instructional System in the Chapter 1 Program of the District of Columbia Public Schools

Introduction

Dolphin is a computer-assisted instruction (CAI) system for teaching and reinforcing skills in reading, language arts, and mathematics. It is built around a time-sharing system in which a DEC PDP-11 computer is networked with 6 to 14 terminals, and a printer. Dolphin is used to present lesson materials, provide drill-and-practice activities, administer locator and mastery tests, and generate a range of management reports.

Chapter 1 of the Education Consolidation and Improvement Act (ECIA) of 1981 provides federal funds to state and local education agencies to meet the special needs of educationally deprived children. The intent is to compensate for student learning handicaps through additional instructional services. The school year (SY) 1984-85 Chapter 1 program in the District of Columbia Public Schools (DCPS) serves identified Chapter 1 students enrolled in 91 target area schools. These include 70 elementary, 13 junior high, and 8 private schools. The schools are selected on the basis of the number children aged 6-16 from families receiving Aid to Families with Dependent Children (AFDC), and the number of children eligible for the free lunch program at each school.

In DCPS, nearly 13,000 students in grades one through seven in public schools and grades one through ten in private schools were eligible to receive Chapter 1 services during SY 1984-85. Criteria used to identify students for participation include standardized achievement test percentile ranking (or criterion-referenced test mastery data, when standardized test scores are unavailable), grade level retention, and transition class placement.

The major goal of ECIA Chapter 1 is to increase the individual competencies and performance of identified Chapter 1 students in the areas of reading and mathematics, accompanied by improved affective behavior. To this end, The DCPS Chapter 1 program employs several instructional interventions including a tutorial program, classroom support services, a microcomputer loan program to the homes, and a learning laboratory.

In DCPS, the TSC® Dolphin system is used to provide drill-and-practice and tutorials for Chapter 1 students in grades three, four, five, and six (SY 84-85) in 50 elementary schools. Dolphin systems were installed in Chapter 1 schools on the basis of mean standardized test scores with those schools having the lowest scores receiving Dolphin first. Dolphin provides one of the three main kinds of learning activities, called a Learning Tripod, in the learning laboratory. Students are sent daily from their regular classrooms to the Chapter 1 lab for 45 minutes of special instruction. The lab generally operates in the context of a Learning Tripod in which students are divided into three groups. One group receives direct teacher instruction in specific skills; one group engages in independent learning experiences which include use of worksheets, reading for pleasure, educational games, listening stations, and tape recorders or other equipment; and, the third group works with either Dolphin, under the supervision of an instructional aide (Dolphin schools), or instructional media such as listening stations and tape recorders (non-Dolphin schools). The Learning Tripod is designed on a 15-minute rotation of these groups, so that each student can work in each of the three activities every day.

The equipment configuration in each of the Dolphin schools consists of a DEC mainframe, eight terminals, and a printer. They are installed in a classroom, or designated area in open schools, in each school. This Learning Lab is staffed by either one or two teachers and an instructional aide. The major job of the instructional aide is to supervise and assist the students working on Dolphin. Most of the equipment was installed in the middle of SY 1983-84 and has been a major component of the Chapter 1 Learning Tripod since then.

The Dolphin hardware represents an investment of three million dollars for DCPS, and the software is used on a yearly lease agreement. For the TSC® Division of Houghton Mifflin, DCPS represents its largest Dolphin installation. Both parties desired an evaluation of the use of the Dolphin system to assess its effectiveness in terms of student learning gains and other positive differences between schools that have been using the system in the Chapter 1 program and those that have not.

Purpose of this Study

The evaluation is intended to provide information to two groups of people for two different purposes, as follows:

1. The primary audience for this evaluation includes management and staff of TSC® Division of Houghton Mifflin. They will use the information provided by the evaluation to inform present and potential customers of the effectiveness of the Dolphin system. They may also use the information in planning any future modifications to the Dolphin system.
2. The second audience includes administrators and staff of the DCPS Chapter 1 program. They will use the information to aid in making decisions about the continued and future role of Dolphin in the Chapter 1 program.

Sources of Information

Potential sources of relevant information were identified to provide a comprehensive base from which to conduct the evaluation. Five categories of study participants were identified as sources of attitudinal, opinion, and program effectiveness data. Six DCPS data bases were identified as sources of achievement, opinion, and student records data. Trained data collectors were to provide observational data.

Method

This section describes the general design of the study, study participants, development of instruments, data collectors, questionnaire administration and data collection processes, student data transferred from DC Public Schools, and statistical analyses.

General Design

Because the DCPS Chapter 1 program includes schools that use Dolphin and those that do not, the general approach for this evaluation was to compare Dolphin and non-Dolphin schools on a comprehensive set of measures of Chapter 1 program effectiveness. Perhaps principal among these measures were the achievement gains of Dolphin and non-Dolphin students over a two-and-a-half year period. The study also was designed to summarize opinions of teachers, aides, and administrators concerning the Dolphin system itself and the D.C. Chapter 1 implementation of Dolphin. The study gathered information on the following:

1. Attitudes of Dolphin teachers and aides regarding Dolphin features and the usefulness, reliability, and effectiveness of Dolphin and its implementation ;
2. Attitudes of regular classroom teachers and principals in Dolphin schools regarding student use of the system and effectiveness of Dolphin;
3. Attitudes of Dolphin teachers and principals regarding effectiveness of Dolphin with other groups of students;
4. Attitudes of Chapter 1 teachers, regular classroom teachers, and principals on the the affective impact of the Chapter 1 program;
5. Attitudes of Chapter 1 students regarding reading and math learning in each component of the Learning Tripod;
6. Impact of Dolphin on other activities occurring within the school, and the manner in which teachers and aides view themselves and their roles;
7. Ways in which the Dolphin system could be improved by TSC®; and,
8. Ways in which the DCPS Chapter 1 use of the system could be improved.

Study Participants

The study participants for this project (referred to in this report as DC Dolphin Evaluation) were as follows: Chapter 1 teachers, principals, regular fourth, fifth, and sixth grade classroom teachers (one from each grade identified as sending the largest number of students to the Chapter 1 lab), and the fourth, fifth, and sixth grade Chapter 1 students at 64 public elementary schools.[1] Instructional aides at 49 Dolphin schools also participated in the study (there were no instructional aides in the Chapter 1 labs of the non-Dolphin schools).

Development of Instruments

Questionnaires were developed for each group described above. The items for the adult populations at all schools were designed to provide both data for comparing Dolphin and non-Dolphin schools and their Chapter 1 programs, and opinions on Dolphin features and implementation. Items for adults included the following:

- background information on education, experience, school roles, professional affiliation and level of activity, and professional awards;
- job satisfaction and support information;
- evaluation of Chapter 1 impact in academic and behavioral areas;
- satisfaction with various areas of the Chapter 1 program;
- evaluation and recommendation of the use of computer-assisted instruction in general;
- teaching and instructional approaches (teachers only);
- involvement of parent groups, services and uses of the media center, resource programs offered (principals only);
- identity of student activities and level of participation (principals only);
- indication of special school problems, percentages of student and teacher turnover (principals only); and,
- indication of special school recognition and other building uses (principals only).

Additional items for adults in Dolphin schools included:

- satisfaction with TSC® training and ongoing support;
- evaluation of objectives and lesson content, reading levels, and general effectiveness; and
- recommendation of the use of Dolphin CAI.

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[1] The original number of 70 schools was reduced due to the following conditions: two schools had no Chapter 1 lab, one school had no fourth, fifth, or sixth grade classes, one school declined to participate, one Chapter 1 teacher died just prior to data collection, and one Chapter 1 teacher quit just prior to data collection.

Other Dolphin specific items for the instructional aides and Dolphin school Chapter 1 teachers included:

- satisfaction with TSC® basic system operations and troubleshooting procedures, methods of determining a student's beginning level, and match to DCPS skill levels;
- rating of the Dolphin hardware, software, and hard copy resource materials;
- evaluation of Curricula Reports;
- use of additional system capabilities;
- amount of down-time; and
- open-ended questions regarding positive/negative side-effects, special problems, most-liked features, desired additions to the system, and student monitoring methods.

The student questionnaires were designed to provide attitudinal measures for comparison between Dolphin and non-Dolphin students. Items included the following:

- evaluation of math and reading learning during each component of the Learning Tripod;
- satisfaction with Chapter 1;
- rating of Chapter 1 and regular classes;
- attitudes about school, grades, and three types of jobs; and
- computer background information.

In addition, Dolphin students were asked about pre-Dolphin computer use, satisfaction with Dolphin, and parents' attitude about Dolphin.

An observation checklist also was developed and used to record and evaluate activities occurring in the Chapter 1 labs. The purpose of this instrument was to provide information on the comparability of the components of the Learning Tripod among Dolphin and non-Dolphin Chapter 1 schools, and to provide data on the implementation and management of Dolphin use within Dolphin schools. The observation checklist included the following:

- attendance and punctuality items;
- three ten-minute blocks for recording number of students present and absent by grade, off-task behavior, and disruptive disciplinary problems in each Learning Tripod component, and for recording requests for assistance, actual assistance, positive reinforcement, and lost or disinterested behavior in the Dolphin or Instructional Media component;
- actual operation of the components and transition from one component to another;
- rating of student respect for teacher and aide and teacher's level of control;
- overall rating of learning experience; and
- recording of materials used in the Independent Learning component and materials/equipment used in the Instructional Media component of non-Dolphin schools.

The data collection instruments are in Appendix A.

Data Collectors

Five data collectors were hired from a group of applicants. The data collectors were doctoral students at local universities. Each had a background in education, experience in urban public school systems with student populations similar to that of DCPS, and knowledge and experience in collecting observational data. Since each data collector was scheduled to work alone in each school, personal attributes were deemed important in the selection of these people. Each received excellent recommendations on ability, dependability, and punctuality from their university advisors and public school administrators. Each was judged to have strong, positive interpersonal skills, self-confidence, and a positive attitude about the goals of the DC Dolphin Evaluation.

The data collectors participated in a one day training session conducted at HumRRO during which they viewed a video tape of a DCPS Chapter 1 Dolphin lab in use. This was followed by an in-depth review and practice with the observation checklist to define and standardize all terms. They reviewed each questionnaire for familiarity and clarification and completed one of the questionnaires for timing purposes. Because of their backgrounds and experience, suggestions for changes and improvements were encouraged and many were incorporated into the final products. Each was given a geographic region of the District of Columbia which contained Dolphin and non-Dolphin schools, a map with school locations, a list of school names, addresses, phone numbers, and names of all target personnel, a calendar of the scheduled data collection for each school, a list of contacts for specific areas of concern or problems, and a complete set of data collection materials.

Questionnaire Administration and Data Collection Processes

Each school principal was contacted by telephone to schedule a day for data collection. This was followed by a letter of information about the DC Dolphin Evaluation, the scheduled data collection date, the data collector's name, and the names of the regular classroom teachers who would receive questionnaires. Data collection was conducted from 16 April through 21 May 1985.[2] A data collector arrived at her/his scheduled school before the instructional day began to meet with the principal and regular classroom teachers, give them a brief description of the DC Dolphin Evaluation, deliver their questionnaires, confirm the need for and value of their participation, and arrange for return of the completed questionnaires (sealed in an attached envelope) by the end of the school day. The data collector then met with the Chapter 1 teacher(s) and, in Dolphin schools, the instructional aide, for a similar introduction, to gain information about the operation of the Learning Lab and the grades of the students in each period, to explain the observation procedures, and to review the administration of the student questionnaire. The data collector completed the observation checklist during each period in which there were any fourth, fifth, or sixth grade students. The student questionnaire was administered at the end of each of those same periods, and the answer sheets were collected by a student and sealed in an envelope. At the end of each day all materials for that school were deposited in a large envelope in preparation for return to HumRRO.

Student Data Transferred from District of Columbia Public Schools

Student data transfer was handled by the DCPS Division of Information Resource Management (DIRM) under the direction of the DCPS Division of Quality Assurance, and included the following:

1. Spring 85 Evaluation System Reading and Mathematics Program Data Collection Form #301 (Form 301) data.
2. Spring 83 Form 301 data for students in grades two, three, four, and five.[3]
3. Spring 85 Comprehensive Tests of Basic Skills (CTBS) data for students in grades four, five, and six at the 64 identified schools.
4. Fall 82 CTBS data for students in grades two, three, four, and five.
5. SY 84-85 enrollment system data for specific items for students in grades four, five, and six at the 64 Chapter 1 schools.
6. Spring 85 Form 300 data for 193 regular classroom teachers in the sample.

HumRRO personnel compiled a merged data set which contained student scores from the 82 and 85 CTBS. The purpose of this compiled data set was to determine the sample from which to compute gain scores. Gain scores (basically, the difference between a pretest score and posttest score on one type of measurement) were computed on those students who had both 82 CTBS and 85 CTBS results matched to the Chapter 1 identifier on the Spring 85 Form 301. The Chapter 1 identifier and student identification numbers (ID) were obtained from Spring 85 Form 301 data for fourth, fifth, and sixth grade students. This file was matched on ID with Spring 85 CTBS data, and additional identifiers of sex and last name were included to then match with the Fall 82 CTBS data.[4] The results of this matching to determine the sample is shown in Table 1. The 1,884 students in the matched 82-85 CTBS data set were sorted by SY84-85 school code, and pretest scores (CTBS 82) compared to posttest scores (CTBS 85) for Total Reading and Total Mathematics. These gain scores were averaged by school. Since the fall 1982 administration of the CTBS in DC schools was done primarily for Chapter 1 students, we are reasonably assured that all students in the study sample were Chapter 1 students both in Fall of 82 and in Spring of 85.

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[2] Standardized achievement testing was conducted in DCPS during the week of 6 May, and no data collection was done during that period.

[3] Spring 83 form 301 data could not be transferred.

Table 1

Results of Match and Merge to Obtain Sample for Gain Scores

Chapter 1 Students:	N	% of N
Identified on Spring 85 Form 301	4378	--
Matched to 85 CTBS	3475	79.4
Matched to 82 CTBS and 85 CTBS	1884	43.0

Statistical Analyses

The basic purpose of the analyses was to determine whether the effectiveness of the Chapter 1 program could, at least in part, be attributable to the presence or absence of Dolphin, or whether there was essentially a chance relationship between Chapter 1 program effectiveness and the presence or absence of Dolphin.

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[4] Date of birth was intended to be used as an additional identifier; however, a coding peculiarity in the Spring 85 CTBS data precluded use of this variable.

The analyses were conducted in five major steps:

1. A set of 18 dependent variable measures of Chapter 1 program effectiveness was selected:

   Student Questionnaire
   - Learns about math with Dolphin/equipment
   - Learns about reading with Dolphin/equipment
   - Would like to be in similar Chapter 1 program
   - Wants to go to college after high school
   - Would like to have a job using a computer
   - Likes coming to school

   Student Records
   - Reading gain score
   - Math gain score
   - Teacher assessment of student interest in reading and math
   - Number of days student absence during current semester

   Regular Teacher Questionnaire
   - Impact of Chapter 1 program on students' reading and math skills and on behavior
   - Assessment of frequency non-Chapter 1 students express desire to be part of Chapter 1

   Chapter 1 Teacher Questionnaires
   - Impact of Chapter 1 program on students' reading and math skills and on behavior
   - Ranking of contribution of CAI/Instructional Media Component to student interest in learning, career awareness, and actual student learning
   - Ranking of CAI/Instructional Media Component based on students' comments about liking

   Principal Questionnaire
   - Satisfaction with areas of the Chapter 1 program
   - Satisfaction with teaching effectiveness of Chapter 1 staff

   Observation Checklist
   - Data Collector rating of Chapter 1 period as a learning experience

2. The Dolphin/non-Dolphin schools were compared on a set of measures that potentially could be related to Chapter 1 program effectiveness, e.g., Chapter 1 teacher experience and education. Here we were attempting to determine whether the Dolphin/non Dolphin schools were significantly different on any measures that could provide alternative explanations (other than the presence/absence of Dolphin) of any differential effectiveness of the Chapter 1 program at the schools. Analyses of variance were used in making these comparisons.

3. The set of potentially related measures identified in Step 2 was subdivided into those that were significantly different between the Dolphin or non-Dolphin schools and those that were not. The measures that were signifcantly different were labelled "control" variables, because before we could attribute differences in Chapter 1 program effectiveness to the presence/absence of Dolphin, we had to control for the differences of these measures. A set of "process" variables was selected from the remaining measures. These were selected on the basis of their promise to further explain the differences among the Chapter 1 schools in program effectiveness once the impact Dolphin had been evaluated.

4. A stepwise multiple regression analysis was performed on each of the 18 measures of Chapter 1 program effectiveness (the dependent variables). The first variables into the regression equation were the control variables. These were followed by two measures of school grade. Then the Dolphin/non-Dolphin variable was entered into the equation in order to determine whether it was significantly related to the dependent measures of program effectiveness, when controlling for any differences among the schools on the previously entered variables. Finally, the process variables that were most related to the remaining school differences were allowed to enter the equation.

5. The significance of the mean differences between the Dolphin and non-Dolphin schools and between grades within schools on each of the 18 measures of Chapter 1 program effectiveness was determined through analyses of variance. The differential effectiveness of Dolphin by grade was determined by testing the significance of Dolphin-grade interaction term in these analyses.

A detailed discussion of these five steps is presented in Appendix B.

Results

This section summarizes data from the main areas of investigation:

1. Comparability of Dolphin and non-Dolphin schools.
2. Measures of Chapter 1 program effectiveness in Dolphin and non-Dolphin schools:
   - Student mean gain scores
   - Student behavioral and attitudinal variables
   - Teacher and principal evaluative variables
   - Data collector rating variable
3. Relationship of measures of Chapter 1 program effectiveness with other variables.
4. Dolphin features and use:
   - Chapter 1 teacher and aide opinions
   - Chapter 1 teacher, aide, regular teacher, and principal opinions
   - Chapter 1 student opinions
   - Dolphin system reliability
5. Opinions about the DC Chapter 1 implementation of Dolphin.

Comparability of Dolphin and Non-Dolphin Schools

Data on the comparability of Dolphin and non-Dolphin Chapter 1 schools are taken from teacher and principal questionnaires. Table 2 summarizes the findings with respect to background variables.

Chapter 1 teachers', regular teachers', and principals' backgrounds

Chapter 1 teachers and regular classroom teachers, in both types of Chapter 1 schools, are essentially equivalent in terms of education, teaching experience, Chapter 1 experience (or the Chapter 1 teachers), professional activity, participation in other school roles, and job satisfaction. School administrators in both Dolphin and non-Dolphin Chapter 1 schools are essentially equivalent in terms of education, administrative experience, and professional activity. Thus, differences in program effectiveness cannot be attributed to these staff background variables.

Principals' reports of school variables

Both Dolphin and non-Dolphin schools showed essentially no differences in number and kind of resource programs that operate, student activities that are available and the participation level in

Table 2

Comparability of Dolphin and Non-Dolphin Schools

(Mean Levels)

	DOLHPIN	NON-DOLPHIN	Significance
Chapter 1 Teachers [a]	N=57	N=14	
Education Level [c]	3.53	3.71	.548
Years of experience as teacher	21.54	20.14	.479
Years of experience in Chapter 1	10.60	9.93	.567
Level of professional activity [d]	9.23	6.90	.163
Number of other school roles [e]	1.12	.82	.354
Satisfaction with job [f]	.54	.48	.617
Regular Teachers [b]	N=136	N=37	
Education Level [c]	2.65	2.71	.782
Years of experience as teacher	19.01	20.23	.309
Level of professional activity [d]	3.08	3.44	.396
Number of other school roles [e]	1.13	1.10	.884
Satisfaction with job [f]	.49	.54	.529
Principals [a]	N=47	N=14	
Education level [g]	2.28	2.38	.720
Years of experience as administrator	13.62	12.50	.440
Level of professional activity [h]	7.23	5.61	.173
Chapter 1 Schools(from Principals) [a]	N=47	N=14	
Number of resource programs [j]	7.09	5.94	.143
Student participation level in available school activities [k]	16.83	14.75	.191
Percent of media center use by regular teachers	78.11	78.08	.997
Percent of media center use by resource teachers	75.51	71.15	.644
Percent of media center use by students	84.29	92.25	.171
Parent group activity level [l]	6.80	4.81	.020
Seriousness of school problems [m]	1.90	2.16	.047

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[a] t-test used

[b] ANOVA used

[c] Scale: 1=Bachelor's, 2=Bachelor's + 15, 3=Master's, 4=Master's + 30, 5=Master's + 60, 6=Doctorate

[d] Sum of 6 items: scale, 0=no memberships, 1=not active, 2=a little, 3=fairly, 4=very; range, 0=none - 24=very active in six memberships

[e] Sum of 7 yes/no items: range, 0=none - 7=all

[f] Scale: 0=no, 1=yes

[g] Scale: 1=Master's, 2=Master's + 30, 3=Master's + 60, 4=Doctorate

[h] Sum Of 7 items: scale, 0=no memberships, 1=not active, 2=a little, 3=fairly, 4=very; range, 0=none - 28=very active in seven memberships

[i] Scale: 1=none, 2=a little, 3=some, 4=a lot

[j] Sum of 11 yes/no items: range, 0=none - 11=all

[k] Sum of 11 scale items: scale, 0=none, 2=fair, 3=good; range, 0=none - 33=good

[l] Sum of 5 items: range, 0=no groups - 20=very active in five groups

[m] Average of 6 items: 1=not at all, 2=minor, 3=moderate, 4=serious

them, and use of media center by teachers and students. However, principals reported a significantly greater parent group activity level in Dolphin than in non-Dolphin schools, and non-Dolphin school principals reported significantly more serious school problems than did Dolphin school principals. The degree to which these factors preceded Dolphin use, or were influenced by it, could not be determined.

Measures of Chapter 1 Program Effectiveness in Dolphin and Non-Dolphin Schools

Mean gain scores of Dolphin and non-Dolphin students

Gain scores were obtained through applying formulas given in Lord (1967), which control the gain scores for the unreliability of both the initial and final scores as well as differences in initial levels. At the same time, Lord points out that it difficult to show significant gain scores on the basis of one treatment and when the data on an individual's pretest group membership cannot be completely determined. Since measures of student assignment to and movement within the Chapter 1 program could not be obtained, and Chapter 1 participation is determined for the beginning of each school year and can change from year to year, the data emerging from the achievement scores analyis must be viewed with caution. The gain scores were calculated separately for each grade by pooling the data across Dolphin and non-Dolphin schools and are expressed in terms of grade equivalencies. Tables 3 and 4 show the results of the analysis of variance on reading and math gain scores using the student as the unit of analysis. The mean gain scores were not significantly different between the Dolphin and non-Dolphin students. However, the gain scores were significantly different by school grade.

Table 3

Mean Student Reading and Math Gain Scores by Dolphin/Non-Dolphin: Fall 82-Spring 85

	DOLPHIN	NON-DOLPHIN	Significance
	N=1464	N=342	
Reading grade equivalent gain	2.7	2.7	.957
	N=1460	N=341	
Math grade equivalent gain	2.6	2.5	.507

Table 4

Mean Student Reading and Math Gain Scores by Grade: Fall 82-Spring 85

	Grade 4	Grade 5	Grade 6	Significance
	N=446	N=721	N=639	
Reading grade equivalent gain	2.0	2.3	3.6	.016
	N=441	N=718	N=642	
Math grade equivalent gain	2.0	2.4	3.2	.0001

Consistent with the statistical design for this evaluation, student data were aggregated by grade within school. Tables 5 and 6 show the results of the analysis of variance and multiple regression analysis on reading and math gain scores using grades within school as the unit of analysis. No significant differences were found between the reading or math gain scores from the Fall 82 to Spring 85 CTBS, between Dolphin and non-Dolphin schools. This result was not unexpected, since in general there is little likelihood that an instructional treatment used for only a short time a day will produce statistically significant test score gains. In the case of Dolphin, students are on the computer for a maximum of 1.25 hours a week. This means that they spend about 35 hours a week being taught by conventional methods. To have a better chance to show statistically significant mean differences, it would probably be necessary for the students' amount of time on the system to be increased substantially. Overall, the gain scores were significantly different by grade, with grade 6 having the highest gains on the average and grade 4 the lowest. Table 6 shows the grade equivalent mean gain scores by grade across Chapter 1 schools.

Table 5

Mean School Reading and Math Gain Scores by Dolphin/Non-Dolphin: Fall 82-Spring 85

	DOLPHIN	NON-DOLPHIN	ANOVA Significance	Regression Significance
	N=145	N=41		
Reading grade equivalent gain	2.6	2.5	.583	.553
	N=145	N=43		
Math grade equivalent gain	2.5	2.4	.318	.378

Table 6

Mean School Reading and Math Gain Scores by Grade: Fall 82-Spring 85

	Grade 4	Grade 5	Grade 6	ANOVA Significance	Regression Significance
	N=62	N=62	N=62		
Reading grade equivalent gain	2.1	2.3	3.3	.0001	.0001
	N=63	N=63	N=62		
Math grade equivalent gain	2.0	2.4	3.1	.0001	.0001

Student attitudinal variables

The tables which follow show the means of ratings made by Dolphin and non-Dolphin students. It should be noted that the number (N) reported in the tables represents the number of schools/grades from which data were collected since all student data were computed as means within grades within schools.

Table 7 shows the significance levels from the analysis of variance and the multiple regression analysis, as well as the actual school means, for the two dependent attitudinal measures on reading and math which were obtained from responses to the Student Questionnaire. Both ratings made by Dolphin students were higher, with the rating of learning reading with the computer significantly higher than the non-Dolphin students' rating of their corresponding question of learning reading with the instructional media equipment. No significant difference in groups means was found with the rating of learning math with the computer or equipment.

Table 7

Measures of Chapter 1 Program Effectiveness for Reading and Math from Student Questionnaire

(Mean Levels)

	DOLPHIN N=138	NON DOLPHIN N=37	ANOVA Significance	Regression Significance
Student Questionnaire				
Learn about math with computer/equipment [a]	2.59	2.47	.078	.108
Learn about reading with computer/equipment [a]	2.62	2.45	.0002	.0001

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[a] Scale: 1=a little, 2=some, 3=a lot

Table 8 shows the significance levels from the analysis of variance and the multiple regression analysis, as well as the actual school means, for four dependent behavioral measures which were obtained from responses to the Student Questionnaire. Dolphin schools had higher means than non-Dolphin schools on the four measures, although not all differences were statistically significantly different. Dolphin students' ratings of wanting to continue in Chapter 1 and liking to go to school were significantly higher than the ratings of non-Dolphin students. In the analysis of variance, Dolphin students' rating of wanting to go to college was significantly higher than that of non-Dolphin students; in the multiple regression analysis, the significance level was just below the .05 level. No significant difference between the two groups was found for liking a computer job.

Table 8

Measures of Chapter 1 Program Effectiveness for Behavioral Variables from Student Questionnaire
(Mean Levels)

	DOLPHIN N=138	NON DOLPHIN N=37	ANOVA Significance	Regression Significance
Want to continue Chapter 1 [a]	2.39	2.11	.002	.0001
Want to go to college [b]	.89	.85	.035	.073
Would like computer job [a]	2.75	2.72	.480	.379
Like to go to school [b]	.87	.81	.034	.009

---

[a] Scale: 1=not, 2=some, 3=a lot

[b] 0=no, 1=yes

Teacher and principal attitudinal variables

Seven dependent variables concerning the effectiveness and impact of the Chapter 1 program were obtained from responses to the teacher and principal questionnaires, and two variables pertaining to student attitudes and behavior were obtained from teacher responses on the Form 301. The mean responses and significance levels from the analysis of variance and the multiple regression analysis for these dependent variables are given in Tables 9, 10, and 11.

Table 9

Measures of Chapter 1 Program Effectiveness from Regular Teacher Questionnaire and Form 301

(Mean Levels)

	DOLPHIN N=134	NON-DOLPHIN N=38	ANOVA Significance	Regression Significance
Teacher Questionnaire				
Chapter 1 impact on student skills and behavior [a]	2.98	2.71	.105	.013
Non-Chapter 1 students express desire to be in Chapter 1 [b]	2.68	2.05	.004	.005
Form 301-Student Records				
Student interest in reading/math [c]	1.00	.79	.043	.046
Number of absences	7.21	7.91	.387	.227

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[a] Average of 10 items: scale, 1=none, 2=a little, 3=some, 4=a lot

[b] Scale: 1=never, 2=rarely, 3=sometimes, 4=often

[c] Scale: 0=not, 1=some, 2=very

Table 10

Measures of Chapter 1 Program Effectiveness from Chapter 1 Teacher Questionnaires

(Mean Levels)

	DOLPHIN N=57	NON-DOLPHIN N=14	t-test Significance	Regression Significance
Chapter 1 impact on student skills and behavior [a]	2.68	2.44	.179	.089
Ranking CAI/Instructional media component to student progress [b]	1.93	1.82	.547	.742
Ranking of CAI/Instructional media component to student liking [c]	2.67	2.31	.049	.008

---

[a] Average of 10 items: scale, 1=none, 2=a little, 3=some, 4=a lot

[b] Average of 3 items: scale, 1=third, 2=second, 3=first

[c] Scale: 1=third, 2=second, 3=first

Table 11

Measures of Chapter 1 Program Effectiveness from Principal Questionnaire

(Mean Levels)

	DOLPHIN N=47	NON-DOLPHIN N=15	t-test Significance	Regression Significance
Satisfaction with areas of Chapter 1 program [a]	3.38	3.09	.042	.693
Satisfaction with teaching effectiveness of Chapter 1 staff [b]	.70	.36	.019	.045

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[a] Average of 6 items: scale, 1=very dissatisfied, 2=dissatisfied, 3=satisfied, 4=very satisfied

[b] Scale: 0=no, 1=yes

Regular teachers. All means for Dolphin schools were higher than those for non-Dolphin schools.[5], though again, not all were significantly different. For the regular teachers, there was a significant difference in the assessment of non-Chapter 1 students who went to be part of the Chapter 1 program. In the rating of the Chapter 1 impact on student skills and behavior, while there was no significant difference (at the .05 level) in the analysis of variance, there was a significant difference in the multiple regression analysis. The teachers' rating of student interest in reading and math was significantly higher in Dolphin schools. No significant difference between the two groups was found in number of absences.

Chapter 1 teachers. For the Chapter 1 teachers, a significant difference between groups was obtained in the ranking of students' liking of the CAI/Instructional Media Component. In the rating of the Chapter impact on student skills and behavior, the results of the multiple regression analysis approaches significance (at .05 level). There was no difference between groups in the ranking of the contribution of the CAI/Instructional Media component to student progress.

Principals. Principals' satisfaction with the Chapter 1 program in their schools, was higher, but not significantly higher, in the Dolphin versus non-Dolphin schools when control variable differences between the schools were taken into account. Principals in Dolphin schools gave significantly higher ratings of effectiveness of their Chapter 1 staff than did principals in non-Dolphin schools, even though as noted earlier, the background variables of the staffs were not different.

Data collector rating variable

The data collectors, each of whom had school and observational experience, completed the Chapter 1 classroom observations. The correlations for the four rating variables from the Observation Checklist were very high. These variables were averaged to form one dependent variable rating of the Chapter 1 classroom learning experience and environment. The mean responses and significance levels for the individual rating variables are shown in Table 12. The mean responses and significance levels from the analysis of variance and the multiple regression analysis for the average variable are given in Table 13. The data collectors gave significantly higher overall or average ratings of the learning experience and environment in the Chapter 1 Dolphin classes than they did in the non-Dolphin classes.

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[5] Numbers of absences were fewer on the average for Dolphin schools; however, this is interpreted as favoring the Dolphin schools.

Table 12

Means of Individual Rating Variables from Observation Checklist

	DOLPHIN N=134	NON-DOLPHIN N=39	ANOVA Significance
Data Collector rating of:			
Ease of transition from one component of Learning Tripod to another [a]	3.34	3.04	.130
Apparent student respect for teacher [b]	3.64	3.20	.023
Apparent level of teacher control [b]	3.67	3.14	.008
Class overall as learning experience [c]	2.91	2.45	.031

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[a] Scale: 1=very disruptive, 2=fairly disruptive, 3=fairly smooth, 4=very smooth

[b] Scale: 1=none, 2=a little, 3=a fair amount, 4=very much

[c] Transformation was made on original five-point scale. Scale: 1=poor, 2=fair, 3=good, 4=very good

Table 13

Measures of Chapter 1 Program Effectiveness from Observation Checklist

(Mean Level)

	DOLPHIN N=134	NON-DOLPHIN N=39	ANOVA Significance	Regression Significance
Data Collector averaged rating of:				
Chapter 1 classroom learning experience and environment	3.36	2.90	.009	.001

Average of 4 items: scale, 1=poor, 2=fair, 3=good, 4=very good

Relationship of Measures of Chapter 1 Effectiveness with Other Variables

Examination of the multiple regression equations for the 18 measures of Chapter 1 program effectiveness yielded few insights into what kinds of other variables are consistently related to

Chapter 1 program effectiveness. Two variables did enter significantly (using the .15 level) into 5 of the regression equations. One of these was the control variable - seriousness of school problems (from the Principal Questionnaire). The other was the process variable - satisfaction with support received from Chapter 1 staff (from the Regular Teacher Questionnaire). As might be expected, when seriousness of school problems entered in the equations, it entered with a negative weight, indicating that the effectiveness of the Chapter 1 program tended to be less in schools with more serious problems. Conversely, when regular teachers were satisfied with the support received from Chapter 1 staff, Chapter 1 program effectiveness tended to be higher. Stronger Chapter 1 program efforts, especially closer coordination with the regular classroom teachers, may be warranted in schools with more serious problems.

Dolphin Features and Use

This section summarizes opinions of teachers, aides, principals and students concerning features of the Dolphin system and the use of Dolphin.

Chapter 1 teacher and aide opinions

Chapter 1 Dolphin teachers and aides responded to identical questions regarding Dolphin features and use of Dolphin in the Chapter 1 program. Proportions for combined positive responses to Dolphin hardware and software are given in Table 14. With only a few exceptions, the level of satisfaction is very high.

In addition to the hardware and software of the Dolphin system, there are printed resource materials that provide descriptions of the reading, language arts, math, and problem solving components and the skills included in each level; instructions for operation and management within each component; overviews of the curricula reports; and guides for troubleshooting. In rating the Dolphin hard copy resource materials, the teachers and aides were in basic agreement with moderately positive responses. These proportions are given in Table 15.

Table 14

Proportion of Respondents Indicating Positive Reactions to Dolphin Features

	% Dolphin Teachers N=56	% Dolphin Aides N=43
Satisfied/Very Satisfied with:		
Major purpose of Dolphin CAI program	100.0	90.7
Ongoing TSC® support via 800 number	98.2	93.0
Initial TSC® Training	94.6	59.5
Basic computer operation procedures	92.9	88.4
Basic troubleshooting steps	91.1	86.0
Method to determine student's beginning level	89.3	81.4
Good/excellent rating of:		
Ease of use of hardware	96.4	90.7
Durability of hardware	96.4	86.0
Dependability of hardware	94.6	88.4
System response time to student input	94.6	90.7
Amount of student feedback	91.1	83.7
Dependability of software	89.3	93.0
Ease of use of software	89.3	90.7
Usefulness of system reports to you	87.5	90.7
Quality of student feedback	87.5	86.0
Timeliness of student feedback	87.5	91.4
Clarity of monitor images	83.9	86.0
Comprehensiveness of information in resource materials	80.4	81.4
Clarity of information in resource materials	80.4	79.1
Physical durability of resource materials	80.4	86.0
Organization/format of resource materials	76.8	83.7
Clarity of directions to students	73.2	81.4
Clarity of content to students	73.2	76.8
Number of practice items	73.2	93.0
Correlation of skills to CBC skills [a]	67.9	88.4
Readability of resource materials	64.3	81.4
Appropriateness of reading levels for students [b]	44.6	76.8

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[a] Competency Based Curriculum which is the DCPS course of study

[b] Refers to contents on the screen

Table 15

Proportion of Respondents Indicating Positive Ratings of Dolphin Curricula Reports

	% Dolphin Teachers N=56	% Dolphin Aides N=43
Adequate/very adequate rating of:		
Curricula Reports for planning/revising instructional materials	75.0	65.1
Curricula Reports for record keeping	62.5	69.8
Curricula Reports for collaboration conference	58.9	60.5
Curricula Reports for monitoring student progress	64.3	51.2

Chapter 1 teacher, aide, regular teacher, and principal ratings

Regular classroom teachers and principals in Dolphin schools also were asked some of the same Dolphin use questions as the Chapter 1 teachers and aides.. Proportions for combined positive responses for each of the four groups are shown in Table 16. All ratings by the Dolphin teachers and aides were higher than those given by non-participating teachers and the principals in the same buildings. This may suggest that they are not as familiar or comfortable with the Dolphin system as they might be.

Table 16

Proportion of Respondents Indicating Positive Opinions of Dolphin Use

	% Dolphin Teachers N=56	% Dolphin Aides N=43	% Regular Teachers N=177	% Principals N=61
Agree/strongly agree that:				
Students hurry to get Dolphin lesson over with rather than trying to learn *	82.1	76.7		
Students answer wrong intentionally to get to stay on Dolphin longer *	91.1	83.7		
Students know how well they're doing in a Dolphin lesson	96.4	90.8		
Dolphin terminal is easy for students to operate	100.0	100.0		
Dolphin terminal text displays are arranged in manner clear and easy to read	64.3	79.1		
Amount of material on Dolphin screen at one time is appropriate length for Chapter 1 students	69.6	76.7		
Dolphin CAI is impersonal *	92.5	86.0	57.1	67.2
Students learn very quickly using Dolphin	60.7	76.7	46.9	62.3
Dolphin is a very effective method of instruction	85.7	90.8	55.4	67.2

---

* Original question wording is negative; proportion represents reversed scale for positive response.

In indicating the effectiveness of the use of Dolphin with other groups of students, all responses are positive; however, there is little agreement among groups. Proportions are shown in Table 17. Dolphin teachers indicate strong positive effectiveness for the use of Dolphin from grades three through six through high school; whereas, the principal ratings are not as positive. Note that principals rate the potential of using Dolphin with students in grades 1 and 2 higher than did the Dolphin teachers.

Table 17

Proportion of Respondents Indicating Positive Reactions to Use of Dolphin with Different Grade Groups [not limited to Chapter 1 students]

	% Dolphin Teachers N=56	% Regular Teachers N=177	% Principals N=61
Dolphin fairly/very effective for:			
All students in grade 1 and 2	55.4		87.2
All students in grades 3 through 6	91.1	58.7	72.1
All students in junior high grades	92.9		62.3
All students in high school grades	92.9		55.7

A breakdown of each group by combined positive response to computer-assisted instruction is given in Table 18. Dolphin teachers show the strongest postive responses to student learning with a computerized method of instruction and to preference for working in a school with computer-assisted instruction. Principals, regular teachers, and Dolphin aides also indicate positive responses to these two items. The Chapter 1 non-Dolphin teachers gave the least positive responses.

Table 18

Proportion of Respondents Indicating Positive Reaction to Use of Computer-Assisted Instruction in General

	% Dolphin Teachers N=56	% Dolphin Aides N=43	% Non-Dolphin Teachers N=15	% Regular Teachers N=177	% Principals N=61
Agree/strongly agree that:					
Students cannot learn what they need to know with computerized method of instruction *	94.6	76.0	53.3	80.2	88.5
Given a choice, I would prefer to work in a school with computer-assisted instruction	94.6		60.0	72.3	85.2

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* Original question wording is negative; proportion represents a reversed scale for positive response.

Dolphin Teachers and Aides also answered open-ended questions concerning Dolphin features, use and effects. Their responses to these questions are listed in Appendix C, and are discussed in the Conclusions section of this report.

Chapter 1 student opinions

Students indicate positive attitudes toward the Dolphin system in regard to thinking they may get a better job someday, to working with Dolphin, and to thinking that their parents like the idea of them working with Dolphin. Student opinions are summarized in Table 19.

Table 19

Proportion of Students Indicating Positive Reactions Toward Dolphin Use

	N=2291
Think working with Dolphin will help to get a better job someday	89.2
Like working with Dolphin a lot	73.3
Parents like the idea of student working with Dolphin	88.8

Dolphin System Reliability

Teachers at 96 percent of the Dolphin schools responded to the questions about down-time of the Dolphin system since installation. Of these, 34 percent reported no down-time. For the remaining 66 percent the mean time between failures was 927.22 hours which indicates that the Dolphin system is very reliable. For those reporting down-time, the greatest proportion (.34) of down-time was attributed to mechanical failure, e.g., CPU breakdowns, defective circuit boards, etc. The remaining causes cited were as follows: high room temperature (.17), terminal and/or software problem (.14), maintenance/servicing of the system (.07), human failure (.03), and cause never determined or no reason given (.24). Approximately half of the teachers noted that the down-time had occurred near the installation time of the Dolphin system and that few problems had been encountered since then.

Opinions about Dolphin Implementation in DC Chapter 1 Program

Several questions posed to the four groups of respondents, Dolphin teachers, Dolphin Aides, regular classroom teachers, and principals, pertain to the way in which the Dolphin system has been implemented in the DC Chapter 1 Program. Responses of the four groups to these questions are shown in Table 20.

Table 20

Proportion of Respondents Indicating Positive Opinions of Dolphin Implementation

	% Dolphin Teachers N=56	% Dolphin Aides N=43	% Regular Teachers N=177	% Principals N=61
Agree/strongly agree that:				
Teachers/aide know what is expected in using Dolphin	98.2	93.0	58.1	73.8
Students feel that no one cares whether they learn using the Dolphin instruction *	96.4	90.8	67.8	
A teacher or aide is readily available for assistance to students using Dolphin	96.4	93.0		
There is a good working relation between teacher(s) and aide in Dolphin lab	94.6	100.0	85.9	
There are so many devices to operate in Dolphin lab that it distracts from instruction *	89.3	88.4		
Background noise in Dolphin lab is distracting to students *	75.0	72.1		
Students feel they do not have enough time to complete the Dolphin material *	48.2	48.8	48.0	

---

* Original question wording is negative; proportion represents a reversed scale for positive response.

There are positive responses for Dolphin teachers and aides regarding Dolphin implementation on six of the seven items. They strongly agree that they know what is expected of them in using Dolphin in the Chapter 1 lab, that at least one of them is readily available to assist students, that students *do not* feel that no one cares whether they learn or not when using Dolphin, that they have a good working relationship with each other, and the devices for operating the Dolphin lab *do not* distract from the instruction. They indicate moderately positive agreement that the background noise in the Dolphin lab *is not* distracting to the students. The principals indicate positive agreement that the teachers and aide know what is expected in using the Dolphin system. Three of the four items asked of regular classroom teachers are moderately positive in regard to Dolphin implementation. Among Dolphin teachers, aides, and regular teachers there is moderate negative agreement on one item - "Students feel they *do* have enough time to complete the Dolphin material" - with all groups just below 50 percent. This pertains to the way in which time on the Dolphin terminals is scheduled in the Chapter 1 lab Learning Tripod and suggests that the program might be more effective with additional terminal time provided to students.

Some of the open-ended question responses listed in Appendix C also pertain to the DC implementation of Dolphin. These are discussed in the Conclusions section of this report.

Conclusions and Recommendations

The conclusions are presented to inform TSC® Division of Houghton Mifflin of Dolphin's effectiveness and to aid the DCPS Chapter 1 program in making decisions about the continued and future role of Dolphin.

Chapter 1 Program Effectiveness in Dolphin versus Non-Dolphin Schools

The main question to be answered for TSC® is whether Dolphin, as it presently exists, is an effective learning tool. Significant reading and math gain scores could not be shown; however, this is not unusual. The educational literature indicates that it is very difficult to show significant gains on the basis of one treatment. The results do show that Dolphin is positively related to student, teacher, and administrator attitudes about learning and to beliefs that learning is occurring.

Very few evaluations of this type are able to report that every criterion variable measured by the study is equal to or higher for the treatment population in contrast to the comparison population even though the measures were obtained from different sources (in this case, questionnaires, test scores, school records, and classroom observations). Not all differences were statistically significant, but the fact that all measures pointed in the direction of Dolphin should not be discounted.

To assess the degree to which Dolphin can positively affect test scores, further research is needed in which some of the problems of the present methodology can be overcome. This might involve:

1. Carefully tracking Dolphin versus non-Dolphin students to ensure that those in the study do not move from one treatment to the other but rather spend the full period of time receiving the assigned treatment;

2. Providing the Dolphin and non-Dolphin groups with more of their reading and mathematics instruction in the respective treatments. Given that most elementary students who are below grade level in basic skills probably receive two to three hours a day of reading, language arts, and mathematics

instruction, providing the groups with a minimum of an hour a day of terminal time or the alternative treatment might well yield the significant results which are sought; and

3. Comparing Dolphin use with alternative computer-based instructional approaches.

Before the present study's results were available, there was less justification for such research. Given these findings, the emerging issue is whether more intensive use of the system will yield even more positive results.

Dolphin and TSC®

There are areas where modifications could be made. Greater flexibility is needed in five areas to enable a school system to tailor Dolphin for its particular needs. The five areas are:

- **Curriculum materials.** Where the Dolphin system does not include material to support certain local skill objectives, or the teachers see a need for more practice items for a skill, the local school district staff should be able to add appropriate student exercises without a major programming effort.

- **Reports.** The report-generating tools should enable teachers or staff to easily generate special report formats to meet local needs. At least a third of the teachers indicated a desire for one or more different reports, or modifications of reports they already get.

- **Correlations with local objectives.** Although correlations have been made between Dolphin skills and DC objectives, many teachers expressed frustration over either lack of precision in the correlation information or unwieldiness in the form in which the correlation information is available to them. Consideration might be given to providing software tools that enable the local district staff to correlate Dolphin material more effectively with local objectives.

- **Applications mix.** Consideration might be given to providing teachers and students with a greater variety of applications software within the operating system environment for Dolphin. An appropriate word processor would be very helpful to teachers in their work, and to students in practicing writing skills. In addition, more activities that stress higher-order thinking skills should be developed.

- **Additional training support.** Dolphin aides need more training time to help them take advantage of the Dolphin system record-keeping and reporting capabilities that assist in monitoring student progress. The capability of the Dolphin system referral option that provides a link to supplementary materials needs to be emphasized as an aid to filling gaps in curricular materials where the Dolphin skills match is not exact. School system or program administrators need to be trained in its use and encouraged to develop a local resource guide for the teachers who use Dolphin.

Dolphin and the DCPS Chapter 1 Program

The major question for the DCPS Chapter 1 program is whether the investment in Dolphin has been worthwhile. The data indicate that the presence of Dolphin is related to measures of areas that educators traditionally consider important. This suggests that the Dolphin system should be maintained and perhaps expanded in the school system. The data indicate that Dolphin is related to:

- increases in student interest in learning;
- student interest in continuing in school and into college;
- teachers' and principals' beliefs that the Chapter 1 program helps students' learning, behavior, and attitudes; and
- non-Dolphin students' desire to participate in the Chapter 1 classes.

Again, there are areas in the use of Dolphin where modifications might be helpful. The Learning Tripod system may need some modification in both Dolphin and non-Dolphin schools. In Dolphin schools, the students may need longer sessions on the computer in order to complete a meaningful piece of work. Some teachers have already devised a more effective scheduling of students into the three components of the tripod. For example, students may rotate through the Dolphin sessions every other day for a half hour rather than every day for fifteen minutes. Program administrators could develop a local resource guide to be used with the referral option and provide it to the teachers and aides who use Dolphin. Responses from Dolphin teachers and aides indicate that expertise in the use of various features of Dolphin exists. These teachers and aides could provide important in-service training for other Dolphin users.

Potential for Expanding Applications of DEC Equipment

Chapter 1 staff have expressed interest in expanding the range of applications software available on the DEC computers used for Dolphin. Interest has been expressed in adding word processors, spelling and word usage checkers, communications programs, and data base managers which would permit the system to support higher level thinking activities. As a small part of the evaluation, we discussed this idea with Chapter 1 staff, TSC® staff, and DEC representatives. Based on those discussions and the other information gathered for the present study, the following factors should be taken into account in considering the possibility of expanding the range of applications on the installed DEC equipment:

- The requirements for applications software need to be derived from instructional goals and objectives. DC Chapter 1 goals and objectives, and evaluation instruments, are currently based on the DC math and reading objectives specified in the Student Progress Plan (SPP) checklists. These SPP checklists reflect little if any emphasis on higher-order thinking skills. Thus, the first step to be taken is delineation of the specific instructional goals and objectives to be supported by such software.

- There are about 15 Chapter 1 elementary schools in DC that do not have the Dolphin DEC equipment installed. If it is desired to include computer-assisted learning and computer-based support for higher-order thinking skills in all Chapter 1 schools, then the requirements of these non-Dolphin schools should be considered.

- The DEC equipment currently installed is being fully used by the Dolphin application in Chapter 1 labs. This suggests that if the use of other software applications is desired, the number of terminals should be increased. If not, the substitution of different learning activities and software may require that some students currently using Dolphin be dropped from that instructional system.

- The DEC PDP-11 is a powerful computer which can run under various operating systems. The Dolphin application software runs under a specially tailored operating system in order to optimize performance of the application. Available application software for the PDP-11 computers, such as word processors, run under different operating systems than the one currently used with Dolphin. To prevent any degradation in the performance of Dolphin, the applications that use a different operating system probably should be scheduled during periods when Dolphin is not being run.

- Two schools or school districts which use PDP-11-based word processors with elementary school children are the French River Teacher Center in Oxford, Massachusetts , and Shoreham-Wading River School District in New York. In evaluating candidate word processing software for the PDP-11, it may be useful to contact these organizations.

Appendix A

Instruments

The following pages contain the data collection instruments and the DCPS Form 301.

An Evaluation of the TSC® Dolphin Computer Assisted Instruction System in the Chapter 1 Program of the District of Columbia Public Schools

CHAPTER 1 LAB TEACHER QUESTIONNAIRE

This is a questionnaire to gather information to assess the effectiveness of Dolphin CAI, as used in the Chapter 1 Program, in producing learning gains. Your help in completing this evaluation will be greatly appreciated.

The information will be used for research and analysis purposes only. Your responses will be held in strictest confidence. No individually identifiable data will be retained after completion and return of the questionnaire.

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Please fold the questionnaire and seal it in the attached envelope before returning it to the data collector.

It is essential that the questionnaire be completed and returned today to the data collector who is in your school.

Thank you for your cooperation.

____
1-5

An Evaluation of the TSC® Dolphin
Computer Assisted Instruction System in the
Chapter 1 Program of the District of Columbia Public Schools

CHAPTER 1 LAB TEACHER QUESTIONNAIRE

PLEASE ANSWER EACH QUESTION BY CHECKING (✓) ONE BOX OR CIRCLING ONE NUMBER UNLESS OTHERWISE INSTRUCTED. THIS QUESTIONNAIRE SHOULD REQUIRE ABOUT 20 MINUTES TO COMPLETE.

Please do n write here

1. What is your educational level? [Check (✓) one].

BACHELOR'S DEGREE ☐1
BACHELOR'S DEGREE PLUS 15 CREDITS TOWARD MASTER'S ☐2
MASTER'S DEGREE ☐3
MASTER'S DEGREE PLUS 30 CREDITS ☐4
MASTER'S DEGREE PLUS 60 CREDITS ☐5
DOCTORATE ☐6

6

2. What type of certification do you currently hold? [Check (✓) one].

PERMANENT ☐1
PROBATIONARY - STANDARD ☐2
PROBATIONARY - PROVISIONAL ☐3
TEMPORARY ☐4
TEMPORARY - EMERGENCY ☐5

7

3. How many years of experience do you have as a teacher? ____YEAR(S) 8-9

4. How many years have you been at your present school? [If less than 6 months, put zero.] _____YEAR(S) 10-11

5. How many years have you worked in the Chapter 1 Program [Including Title 1 experience]? ______YEAR(S) 12-13

6. Do you serve in any of these roles? [Circle one number for each]

	YES	NO	
CBC CHAIR	1	0	14
GRADE LEVEL CHAIR	1	0	15
AIMS COORDINATOR (local school)	1	0	16
TEAM LEADER	1	0	17
CLUB/ACTIVITY SPONSOR	1	0	18
SCHOOL REPRESENTATIVE TO PTA (or other parent group)	1	0	19
OTHER (Specify ________________)	1	0	20

7. What are your currently active professional affiliations?
[Check (✓) YES or NO for each organization] **For each YES, circle the appropriate number to indicate your level of participation in that organization.**

	YES	NO	NOT AT ALL ACTIVE	A LITTLE ACTIVE	FAIRLY ACTIVE	VERY ACTIVE	Please do n write here.
WASHINGTON TEACHERS' UNION, AFL-CIO LOCAL #6	☐	☐ 0	1	2	3	4	21
ALLIANCE OF BLACK SCHOOL EDUCATORS	☐	☐ 0	1	2	3	4	22
INTERNATIONAL READING ASSOCIATION	☐	☐ 0	1	2	3	4	23
NATIONAL COUNCIL FOR TEACHERS OF MATHEMATICS	☐	☐ 0	1	2	3	4	24
ASSOCIATION FOR SUPERVISION AND CURRICULUM DEVELOPMENT	☐	☐ 0	1	2	3	4	25
OTHER (Specify__________)	☐	☐ 0	1	2	3	4	26

8. What career related awards have you received? [Circle one number for each]

	YES	NO	
SUPERINTENDENT'S TEACHER INCENTIVE AWARD	1	0	27
SCHOOL INCENTIVE STAFF DEVELOPMENT AWARD (SISDA)	1	0	28
TEACHER OF THE YEAR AWARD	1	0	29
AGNES MEYER OUTSTANDING TEACHER AWARD (Washington Post)	1	0	30
MINI-GRANTS IN EDUCATION AWARD (Washington Post)	1	0	31
OTHER (Specify ______________________________)	1	0	32

9. How many times during an average month does your principal visit your classroom to observe or participate in student activities? _______ TIMES 33

10. How many times during an average month does your school counselor visit your classroom to observe student activities? _______ TIMES 34

11. Please rank these approaches from 1 to 3 to indicate which tendency characterizes your teaching approach the most to least. [most=1, intermediate=2, least=3]

Please do n write here

GIVE MORE TIME AND ATTENTION TO STUDENTS WITH LOW INITIAL ABILITIES. [_] 35
GIVE MORE TIME AND ATTENTION TO STUDENTS WITH HIGH INITIAL ABILITIES. [_] 36
GIVE EQUAL TIME AND ATTENTION TO ALL STUDENTS. [_] 37

12. Please rank these approaches from 1 to 3 to indicate which tendency characterizes your instructional method the most to least. [most=1, intermediate=2, least=3]

HAVE STUDENTS OBTAIN INFORMATION FROM WRITTEN MATERIALS. [_] 38
HAVE STUDENTS OBTAIN INFORMATION FROM PRACTICING WITH CONCRETE MATERIALS. [_] 39
HAVE STUDENTS OBTAIN INFORMATION BY INFERENCES MADE BY DEALING WITH A LOT OF DIFFERENT MATERIALS. [_] 40

13. Please circle one number for each to indicate how much impact you would say the Chapter 1 program in your school has had on improving student skills in the following areas:

	HAS HAD NO IMPACT	HAS HAD A LITTLE IMPACT	HAS HAD SOME IMPACT	HAS HAD A LOT OF IMPACT	
READING SKILLS	1	2	3	4	41
LANGUAGE ARTS SKILLS	1	2	3	4	42
MATH COMPUTATION SKILLS	1	2	3	4	43
MATH PROBLEM SOLVING SKILLS	1	2	3	4	44
ATTENDANCE	1	2	3	4	45
CLASSROOM BEHAVIOR	1	2	3	4	46
ATTENTION SPAN	1	2	3	4	47
MOTIVATION	1	2	3	4	48
SELF-CONCEPT	1	2	3	4	49
ATTITUDE TOWARD SCHOOL	1	2	3	4	50

14. Please circle the appropriate number to indicate your overall level of satisfaction for each of the following areas:

	VERY DISSATISFIED	DISSATISFIED	SATISFIED	VERY SATISFIED	Please do r write here
CURRENT POSITION OR ASSIGNMENT	1	2	3	4	51
CURRENT SCHOOL PLACEMENT	1	2	3	4	52
WORKING IN THE DCPS	1	2	3	4	53
DAY TO DAY SUPPORT RECEIVED FROM YOUR SCHOOL PRINCIPAL	1	2	3	4	54
INITIAL TRAINING RECEIVED FROM THE CHAPTER 1 PROGRAM TO OPERATE YOUR LAB	1	2	3	4	55
ONGOING SUPPORT RECEIVED FROM THE CHAPTER 1 PERSONNEL IN THE LEA OFFICE, DCPS	1	2	3	4	56

15. Please rank the components of the Learning Tripod from 1 to 3 to indicate which you think contributes most to least to student interest in learning. [contributes most=1, intermediate=2, contributes least=3]

DIRECT INSTRUCTION	☐	57
COMPUTER-ASSISTED LEARNING	☐	58
INDEPENDENT LEARNING	☐	59

16. Please rank the components of the Learning Tripod from 1 to 3 to indicate which you think contributes most to least to student awareness of career opportunities. [contributes most=1, intermediate=2, contributes least=3]

DIRECT INSTRUCTION	☐	60
COMPUTER-ASSISTED LEARNING	☐	61
INDEPENDENT LEARNING	☐	62

Please do n
write here.

17. Please rank the components of the Learning Tripod from 1 to 3 to indicate which you think contributes most to least to actual student learning. [contributes most=1, intermediate=2, contributes least=3]

DIRECT INSTRUCTION	[ ]	63
COMPUTER-ASSISTED LEARNING	[ ]	64
INDEPENDENT LEARNING	[ ]	65

18. Based on your students' comments, please rank from 1 to 3 the most to least liked component of the Learning Tripod. [most liked=1, intermediate =2, least liked=3]

DIRECT INSTRUCTION	[ ]	66
COMPUTER-ASSISTED LEARNING	[ ]	67
INDEPENDENT LEARNING	[ ]	68

19. How satisfied are you with each of the following areas of the Chapter 1 Program? Please circle one number for each to indicate your level of satisfaction.

	VERY DISSATISFIED	DISSATISFIED	SATISFIED	VERY SATISFIED	
THE CRITERIA USED TO IDENTIFY STUDENTS FOR PARTICIPATION IN THE CHAPTER 1 PROGRAM	1	2	3	4	69
THE MAJOR GOAL OF THE CHAPTER 1 PROGRAM	1	2	3	4	70
THE CLASSROOM SUPPORT SERVICES PROGRAM	1	2	3	4	71
THE S.T.A.R.S. TUTORIAL PROGRAM	1	2	3	4	72
THE PROCEDURE FOR CONDUCTING A COLLABORATION CONFERENCE	1	2	3	4	73
THE CHARACTERISTICS OF THE LEARNING TRIPOD	1	2	3	4	74

20. Please circle one number for each to indicate your opinion of the following statements.

	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	Please do r write here
THE OBJECTIVES OF THE CHAPTER 1 PROGRAM ARE CLEAR TO ME	1	2	3	4	75
THERE IS A GOOD WORKING RELATIONSHIP BETWEEN THE CLASSROOM TEACHERS AND THE CHAPTER 1 TEACHERS	1	2	3	4	76
THE SHIFTS FROM ONE INSTRUCTIONAL MEDIUM TO ANOTHER DURING CHAPTER 1 CLASSES INTERFERE WITH LEARNING	1	2	3	4	77
STUDENTS CANNOT LEARN WHAT THEY NEED TO KNOW WITH A COMPUTERIZED METHOD OF INSTRUCTION	1	2	3	4	78
THE CHAPTER 1 PROGRAM IS TOO DISRUPTIVE TO REGULAR DAILY INSTRUCTION	1	2	3	4	79
GIVEN A CHOICE, I WOULD PREFER TO WORK IN A SCHOOL THAT HAS COMPUTER-ASSISTED INSTRUCTION	1	2	3	4	80

Please do n
write here.

21. How many months have you worked with the Dolphin CAI system? ________MONTH(S) 6-7

22. Did you use a computer for educational purposes before working with the Dolphin System?

YES	NO	
1	0	8

23. What is your level of computer skills? [Check (✓) one]

NOT AT ALL EXPERIENCED	[ ]1	9
A LITTLE EXPERIENCED	[ ]2	
FAIRLY EXPERIENCED	[ ]3	
VERY EXPERIENCED	[ ]4	

24. How satisfied are you with each of the following areas of the Chapter 1 Program? Please circle one number for each to indicate your level of satisfaction.

	VERY DISSATISFIED	DISSATISFIED	SATISFIED	VERY SATISFIED	
THE MAJOR PURPOSE OF THE DOLPHIN CAI PROGRAM	1	2	3	4	10
THE METHOD FOR DETERMINING A STUDENT'S BEGINNING SKILL LEVEL WITH DOLPHIN	1	2	3	4	11
THE MATCH BETWEEN THE DOLPHIN SKILL LEVEL AND THE CBC/SPP SKILL	1	2	3	4	12
THE BASIC COMPUTER OPERATION PROCEDURES [start-up, back-ups, shut-down]	1	2	3	4	13
THE BASIC TROUBLESHOOTING STEPS	1	2	3	4	14
INITIAL TRAINING RECEIVED FROM THE TSC® DIVISION OF HOUGHTON MIFFLIN TO USE THE DOLPHIN CAI PROGRAM	1	2	3	4	15
ONGOING SUPPORT RECEIVED FROM TSC® PERSONNEL VIA THE 800 PHONE NUMBER	1	2	3	4	16

25. Please circle one number for each area to indicate your rating of the Dolphin computer hardware.

	POOR	FAIR	GOOD	EXCELLENT	Please do r write here
DEPENDABILITY	1	2	3	4	17
EASE OF USE	1	2	3	4	18
DURABILITY	1	2	3	4	19
CLARITY OF MONITOR IMAGES	1	2	3	4	20

26. Please circle one number for each area to indicate your rating of the Dolphin software.

	POOR	FAIR	GOOD	EXCELLENT	
DEPENDABILITY	1	2	3	4	21
EASE OF USE	1	2	3	4	22
CORRELATION OF SKILLS TO CBC LEVELS	1	2	3	4	23
CLARITY OF DIRECTIONS TO STUDENTS	1	2	3	4	24
CLARITY OF CONTENT TO STUDENTS	1	2	3	4	25
APPROPRIATENESS OF READING LEVELS FOR STUDENTS	1	2	3	4	26
NUMBER OF PRACTICE ITEMS	1	2	3	4	27
USEFULNESS OF SYSTEM REPORTS TO YOU	1	2	3	4	28
SYSTEM RESPONSE TIME TO INPUT BY STUDENTS	1	2	3	4	29
QUALITY OF STUDENT FEEDBACK	1	2	3	4	30
AMOUNT OF STUDENT FEEDBACK	1	2	3	4	31
TIMELINESS OF STUDENT FEEDBACK	1	2	3	4	32

27. Please circle one number for each area to indicate your rating of the Dolphin resource materials.

	POOR	FAIR	GOOD	EXCELLENT	
READABILITY	1	2	3	4	33
COMPREHENSIVENESS OF INFORMATION	1	2	3	4	34
CLARITY OF INFORMATION	1	2	3	4	35
ORGANIZATION/FORMAT	1	2	3	4	36
PHYSICAL DURABILITY	1	2	3	4	37

Please do n
write here

28. How adequate are the Curricula Reports, in general, in providing information for planning and revising instructional materials? [Circle one number]

WOULD YOU SAY THEY ARE ...

VERY INADEQUATE	INADEQUATE	ADEQUATE	VERY ADEQUATE
1	2	3	4

38

Please list the three most and three least useful Curricula Reports for planning and revising instructional materials. [most or least useful=1, second most or least useful=2, third most or least useful=3]

MOST USEFUL	LEAST USEFUL
1. ____________________	1. ____________________
2. ____________________	2. ____________________
3. ____________________	3. ____________________

29. How adequate are the Curricula Reports, in general, in providing information for record keeping? [Circle one number]

WOULD YOU SAY THEY ARE ...

VERY INADEQUATE	INADEQUATE	ADEQUATE	VERY ADEQUATE
1	2	3	4

39

Please list the three most and three least useful Curricula Reports for record keeping. [most or least useful=1, second most or least useful=2, third most or least useful=3]

MOST USEFUL	LEAST USEFUL
1. ____________________	1. ____________________
2. ____________________	2. ____________________
3. ____________________	3. ____________________

Please do r
write here

30. How adequate are the Curricula Reports, in general, in providing information for the collaboration conference? [Circle one number]

WOULD YOU SAY THEY ARE ...	VERY INADEQUATE	INADEQUATE	ADEQUATE	VERY ADEQUATE	
	1	2	3	4	40

Please list the three most and three least useful Curricula Reports for the collaboratin conference. [most or least useful=1, second most or least useful=2, third most or least useful=3]

MOST USEFUL	LEAST USEFUL
1. ____________________	1. ____________________
2. ____________________	2. ____________________
3. ____________________	3. ____________________

31. How adequate are the Curricula Reports, in general, in providing information for monitoring student progress? [Circle one number]

WOULD YOU SAY THEY ARE ...	VERY INADEQUATE	INADEQUATE	ADEQUATE	VERY ADEQUATE	
	1	2	3	4	41

Please list the three most and three least useful Curricula Reports for monitoring student progress. [most or least useful=1, second most or least useful=2, third most or least useful=3]

MOST USEFUL	LEAST USEFUL
1. ____________________	1. ____________________
2. ____________________	2. ____________________
3. ____________________	3. ____________________

Circle one number for each of the following:

	YES	NO	
32. Do you use Skill Review?	1	0	42
33. Do you use the Referral option?	1	0	43
34. Do you use the monitoring capability of the Dolphin system?	1	0	44
35. Do you use the computer generated worksheets?	1	0	45

Please do nc
write here.

36. Please describe the activities included in your Independent Learning component of the Learning Tripod.

____

____

37. What feature(s) would you like to see added to the Dolphin system?

____

____

38. What do you like most about the Dolphin system?

____

____

39. How much down-time has been experienced with the Dolphin system? 46-47

_____ NONE
_____ HOUR(S)
_____ DAY(S)
_____ WEEK(S)

If down-time was experienced, what was the cause? ____________________

____

40. What is your alternative activity during computer down-time?

____

____

41. What positive side effects or by-products can be attributed to the implementation of Dolphin CAI?

____

____

Please do no
write here.

42. What negative side effects or by-products can be attributed to the implementation of Dolphin CAI?

____

____

43. When you are assigning a survey test, how many skills do you usually include? ________ SKILLS 48-49

44. When you are assigning a survey test, which number of items per skill do you usuall use? [Circle one number]

	ONE	TWO	THREE	
	1	2	3	50

45. On the average, how many skills do you assign to a student each week? ________ SKILL(S) 51

46. What special problems have been encountered when entering lesson information?

____

____

____

47. Describe your procedure for monitoring a student's progress while s/he is working with Dolphin.

____

____

____

____

____

46. Please circle one number for each to indicate your opinion of the following statements.

	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	Please do n write here.
I KNOW WHAT IS EXPECTED OF ME IN USING DOLPHIN IN THE CHAPTER 1 LAB.	1	2	3	4	52
STUDENTS HURRY THROUGH THE DOLPHIN LESSONS TO GET THEM OVER WITH RATHER THAN TRYING TO LEARN.	1	2	3	4	53
STUDENTS ANSWER QUESTIONS WRONG INTENTIONALLY IN ORDER TO STAY ON THE DOLPHIN SYSTEM.	1	2	3	4	54
STUDENTS KNOW HOW WELL THEY ARE DOING IN A DOLPHIN LESSON.	1	2	3	4	55
STUDENTS FEEL THAT NO ONE REALLY CARES WHETHER THEY LEARN OR NOT USING THE DOLPHIN INSTRUCTION.	1	2	3	4	56
STUDENTS FEEL THEY DON'T HAVE ENOUGH TIME TO COMPLETE THE DOLPHIN MATERIAL	1	2	3	4	57
A TEACHER OR AIDE IS READILY AVAILABLE FOR PROVIDING ASSISTANCE TO STUDENTS USING THE DOLPHIN SYSTEM.	1	2	3	4	58
THE DOLPHIN TERMINAL IS EASY FOR STUDENTS TO OPERATE.	1	2	3	4	59
THE DOLPHIN TERMINAL TEXT DISPLAYS ARE ARRANGED IN A MANNER THAT IS CLEAR AND EASY TO READ.	1	2	3	4	60
THE AMOUNT OF MATERIAL PRESENTED ON THE DOLPHIN SCREEN AT ONE TIME IS AN APPROPRIATE LENGTH FOR MY CHAPTER 1 STUDENTS.	1	2	3	4	61

49. Please circle one number for each to indicate your opinion of the following statements.

	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	Please do n write here
THE DOLPHIN CAI IS TOO IMPERSONAL FOR THE STUDENTS IN THE CHAPTER 1 LAB.	1	2	3	4	62
STUDENTS LEARN THE MATERIAL VERY QUICKLY USING THE DOLPHIN CAI INSTRUCTION	1	2	3	4	63
THERE IS A GOOD WORKING RELATIONSHIP BETWEEN THE TEACHER(S) AND AIDE(S) IN THE CHAPTER 1 CLASSES.	1	2	3	4	64
BACKGROUND NOISE (VOICES, MOVEMENT, OPERATION OF EQUIPMENT) IS DISTRACTING TO STUDENTS IN THE CHAPTER 1 LAB.	1	2	3	4	65
THERE ARE SO MANY DEVICES (COMPUTER, TERMINALS, PRINTER) TO OPERATE IN THE CHAPTER 1 LAB THAT IT DISTRACTS FROM THE INSTRUCTION.	1	2	3	4	66
DOLPHIN CAI IS A VERY EFFECTIVE METHOD OF INSTRUCTION.	1	2	3	4	67

50. Please circle one number for each to indicate how effective you think Dolphin would be for other groups of students.

	VERY INEFFECTIVE	FAIRLY INEFFECTIVE	FAIRLY EFFECTIVE	VERY EFFECTIVE	Please do r write here
HOW EFFECTIVE DO YOU THINK A DOLPHIN-LIKE SYSTEM WOULD BE FOR ALL STUDENTS IN GRADES 1 AND 2?	1	2	3	4	68
HOW EFFECTIVE DO YOU THINK A DOLPHIN-LIKE SYSTEM WOULD BE FOR ALL STUDENTS IN GRADES 3 THROUGH 6?	1	2	3	4	69
HOW EFFECTIVE DO YOU THINK A DOLPHIN-LIKE SYSTEM WOULD BE FOR ALL STUDENTS IN JUNIOR HIGH SCHOOL?	1	2	3	4	70
HOW EFFECTIVE DO YOU THINK A DOLPHIN-LIKE SYSTEM WOULD BE FOR ALL STUDENTS IN SENIOR HIGH SCHOOL?	1	2	3	4	71

THANK YOU FOR YOUR COOPERATION.

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PLEASE ANSWER EACH QUESTION BY CHECKING (✓) ONE BOX OR CIRCLING ONE NUMBER UNLESS OTHERWISE INSTRUCTED. IF SOMETHING DOES NOT APPLY TO YOUR LAB, WRITE N/A OR A SHORT NOTE. THIS QUESTIONNAIRE SHOULD REQUIRE ABOUT 15 MINUTES TO COMPLETE.

Please do n
write here.

1. What is your educational level? [Check (✓) one].

BACHELOR'S DEGREE ☐1
BACHELOR'S DEGREE PLUS 15 CREDITS TOWARD MASTER'S ☐2
MASTER'S DEGREE ☐3 6
MASTER'S DEGREE PLUS 30 CREDITS ☐4
MASTER'S DEGREE PLUS 60 CREDITS ☐5
DOCTORATE ☐6

2. What type of certification do you currently hold? [Check (✓) one].

PERMANENT ☐1
PROBATIONARY - STANDARD ☐2
PROBATIONARY - PROVISIONAL ☐3 7
TEMPORARY ☐4
TEMPORARY - EMERGENCY ☐5

3. How many years of experience do you have as a teacher? _____YEAR(S) 8-9

4. How many years have you been at your present school? [If less than 6 months, put zero.] _____YEAR(S) 10-11

5. How many years have you worked in the Chapter 1 Program [Including Title 1 experience]? ______YEAR(S) 12-13

6. Do you serve in any of these roles? [Circle one number for each]

	YES	NO	
CBC CHAIR	1	0	14
GRADE LEVEL CHAIR	1	0	15
AIMS COORDINATOR (local school)	1	0	16
TEAM LEADER	1	0	17
CLUB/ACTIVITY SPONSOR	1	0	18
SCHOOL REPRESENTATIVE TO PTA (or other parent group)	1	0	19
OTHER (Specify ________________)	1	0	20

7. What are your currently active professional affiliations?
[Check (√) YES or NO for each organization] For each YES, circle the appropriate number to indicate your level of participation in that organization.

	YES	NO	NOT AT ALL ACTIVE	A LITTLE ACTIVE	FAIRLY ACTIVE	VERY ACTIVE	Please do n write here
WASHINGTON TEACHERS' UNION, AFL-CIO LOCAL #6	☐	☐ 0	1	2	3	4	21
ALLIANCE OF BLACK SCHOOL EDUCATORS	☐	☐ 0	1	2	3	4	22
INTERNATIONAL READING ASSOCIATION	☐	☐ 0	1	2	3	4	23
NATIONAL COUNCIL FOR TEACHERS OF MATHEMATICS	☐	☐ 0	1	2	3	4	24
ASSOCIATION FOR SUPERVISION AND CURRICULUM DEVELOPMENT	☐	☐ 0	1	2	3	4	25
OTHER (Specify__________)	☐	☐ 0	1	2	3	4	26

8. What career related awards have you received? [Circle one number for each]

	YES	NO	
SUPERINTENDENT'S TEACHER INCENTIVE AWARD	1	0	27
SCHOOL INCENTIVE STAFF DEVELOPMENT AWARD (SISDA)	1	0	28
TEACHER OF THE YEAR AWARD	1	0	29
AGNES MEYER OUTSTANDING TEACHER AWARD (Washington Post)	1	0	30
MINI-GRANTS IN EDUCATION AWARD (Washington Post)	1	0	31
OTHER (Specify ________________________________)	1	0	32

9. How many times during an average month does your principal visit your classroom to observe or participate in student activities? ______ TIMES 33

10. How many times during an average month does your school counselor visit your classroom to observe student activities? ______ TIMES 34

Please do r write here

11. Please rank these approaches from 1 to 3 to indicate which tendency characterizes your teaching approach the most to least. [most=1, intermediate=2, least=3]

GIVE MORE TIME AND ATTENTION TO STUDENTS WITH LOW INITIAL ABILITIES. [_] 35
GIVE MORE TIME AND ATTENTION TO STUDENTS WITH HIGH INITIAL ABILITIES. [_] 36
GIVE EQUAL TIME AND ATTENTION TO ALL STUDENTS. [_] 37

12. Please rank these approaches from 1 to 3 to indicate which tendency characterizes your instructional method the most to least. [most=1, intermediate=2, least=3]

HAVE STUDENTS OBTAIN INFORMATION FROM WRITTEN MATERIALS. [_] 38
HAVE STUDENTS OBTAIN INFORMATION FROM PRACTICING WITH CONCRETE MATERIALS. [_] 39
HAVE STUDENTS OBTAIN INFORMATION BY INFERENCES MADE BY DEALING WITH A LOT OF DIFFERENT MATERIALS. [_] 40

13. Please circle one number for each to indicate how much impact you would say the Chapter 1 program in your school has had on improving student skills in the following areas:

	HAS HAD NO IMPACT	HAS HAD A LITTLE IMPACT	HAS HAD SOME IMPACT	HAS HAD A LOT OF IMPACT	
READING SKILLS	1	2	3	4	41
LANGUAGE ARTS SKILLS	1	2	3	4	42
MATH COMPUTATION SKILLS	1	2	3	4	43
MATH PROBLEM SOLVING SKILLS	1	2	3	4	44
ATTENDANCE	1	2	3	4	45
CLASSROOM BEHAVIOR	1	2	3	4	46
ATTENTION SPAN	1	2	3	4	47
MOTIVATION	1	2	3	4	48
SELF-CONCEPT	1	2	3	4	49
ATTITUDE TOWARD SCHOOL	1	2	3	4	50

14. Please circle the appropriate number to indicate your overall level of satisfaction for each of the following areas:

	VERY DISSATISFIED	DISSATISFIED	SATISFIED	VERY SATISFIED	Please do r write here
CURRENT POSITION OR ASSIGNMENT	1	2	3	4	51
CURRENT SCHOOL PLACEMENT	1	2	3	4	52
WORKING IN THE DCPS	1	2	3	4	53
DAY TO DAY SUPPORT RECEIVED FROM YOUR SCHOOL PRINCIPAL	1	2	3	4	54
INITIAL TRAINING RECEIVED FROM THE CHAPTER 1 PROGRAM TO OPERATE YOUR LAB	1	2	3	4	55
ONGOING SUPPORT RECEIVED FROM THE CHAPTER 1 PERSONNEL IN THE LEA OFFICE, DCPS	1	2	3	4	56

15. Please rank the components of the Learning Tripod from 1 to 3 to indicate which you think contributes most to least to student interest in learning. [contributes most=1, intermediate=2, contributes least=3]

DIRECT INSTRUCTION	[ ]	57
INSTRUCTIONAL MEDIA	[ ]	58
INDEPENDENT LEARNING	[ ]	59

16. Please rank the components of the Learning Tripod from 1 to 3 to indicate which you think contributes most to least to student awareness of career opportunities. [contributes most=1, intermediate=2, contributes least=3]

DIRECT INSTRUCTION	[ ]	60
INSTRUCTIONAL MEDIA	[ ]	61
INDEPENDENT LEARNING	[ ]	62

17. Please rank the components of the Learning Tripod from 1 to 3 to indicate which you think contributes most to least to actual student learning. [contributes most=1, intermediate=2, contributes least=3]

		Please do n write here
DIRECT INSTRUCTION	[ ]	63
INSTRUCTIONAL MEDIA	[ ]	64
INDEPENDENT LEARNING	[ ]	65

18. Based on your students' comments, please rank from 1 to 3 the most to least liked component of the Learning Tripod. [most liked=1, intermediate =2, least liked=3]

DIRECT INSTRUCTION	[ ]	66
INSTRUCTIONAL MEDIA	[ ]	67
INDEPENDENT LEARNING	[ ]	68

19. How satisfied are you with each of the following areas of the Chapter 1 Program? Please circle one number for each to indicate your level of satisfaction.

	VERY DISSATISFIED	DISSATISFIED	SATISFIED	VERY SATISFIED	
THE CRITERIA USED TO IDENTIFY STUDENTS FOR PARTICIPATION IN THE CHAPTER 1 PROGRAM	1	2	3	4	69
THE MAJOR GOAL OF THE CHAPTER 1 PROGRAM	1	2	3	4	70
THE CLASSROOM SUPPORT SERVICES PROGRAM	1	2	3	4	71
THE S.T.A.R.S. TUTORIAL PROGRAM	1	2	3	4	72
THE PROCEDURE FOR CONDUCTING A COLLABORATION CONFERENCE	1	2	3	4	73
THE CHARACTERISTICS OF THE LEARNING TRIPOD	1	2	3	4	74

20. Please circle one number for each to indicate your opinion of the following statements.

	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	Please do r write here
THE OBJECTIVES OF THE CHAPTER 1 PROGRAM ARE CLEAR TO ME	1	2	3	4	75
THERE IS A GOOD WORKING RELATIONSHIP BETWEEN THE CLASSROOM TEACHERS AND THE CHAPTER 1 TEACHERS	1	2	3	4	76
THE SHIFTS FROM ONE INSTRUCTIONAL MEDIUM TO ANOTHER DURING CHAPTER 1 CLASSES INTERFERE WITH LEARNING	1	2	3	4	77
STUDENTS CANNOT LEARN WHAT THEY NEED TO KNOW WITH A COMPUTERIZED METHOD OF INSTRUCTION	1	2	3	4	78
THE CHAPTER 1 PROGRAM IS TOO DISRUPTIVE TO REGULAR DAILY INSTRUCTION	1	2	3	4	79
GIVEN A CHOICE, I WOULD PREFER TO WORK IN A SCHOOL THAT HAS COMPUTER-ASSISTED INSTRUCTION	1	2	3	4	80

THANK YOU FOR YOUR COOPERATION.

An Evaluation of the TSC® Dolphin Computer Assisted Instruction System in the Chapter 1 Program of the District of Columbia Public Schools

CHAPTER 1 LAB AIDE QUESTIONNAIRE

This is a questionnaire to gather information to assess the effectiveness of Dolphin CAI, as used in the Chapter 1 Program, in producing learning gains. Your help in completing this evaluation will be greatly appreciated.

The information will be used for research and analysis purposes only. Your responses will be held in strictest confidence. No individually identifiable data will be retained after completion and return of the questionnaire.

This evaluation is being conducted by the Human Resources Research Organization (HumRRO), Alexandria, Virginia. Questions or comments should be directed to Ms. Carolyn Harris at HumRRO, 549-3611.

Please fold the questionnaire and seal it in the attached envelope before returning it to the data collector.

It is essential that the questionnaire be completed and returned today to the data collector who is in your school.

Thank you for your cooperation.

1-5

An Evaluation of the TSC® Dolphin
Computer Assisted Instruction System in the
Chapter 1 Program of the District of Columbia Public Schools

CHAPTER 1 LAB AIDE QUESTIONNAIRE

PLEASE ANSWER EACH QUESTION BY CHECKING (✓) ONE BOX OR CIRCLING ONE NUMBER UNLESS OTHERWISE INSTRUCTED. THIS QUESTIONNAIRE SHOULD REQUIRE ABOUT 15 MINUTES TO COMPLETE.

Please do n
write here.

1. What is your educational level? [Check (✓) one].

LESS THAN HIGH SCHOOL ☐1
HIGH SCHOOL DIPLOMA OR GED ☐2
TECHNICAL CERTIFICATE ☐3 — 6
ASSOCIATE, TWO-YEAR COLLEGE DEGREE ☐4
BACHELOR'S DEGREE ☐5
OTHER (Specify ______________________________) ☐6

2. How many years of experience do you have as an educational aide? ____YEAR(S) — 7-8

3. How many years have you been at your present school? [If less than 6 months, put zero.] ____YEAR(S) — 9-10

4. How many years have you worked in the Chapter 1 Program [Including Title 1 experience]? _____YEAR(S) — 11-12

5. How many months have you worked with the Dolphin CAI system? _____MONTH(S) — 13-14

6. Did you use a computer for educational purposes before working with the Dolphin system?

YES	NO
1	0

15

7. What is your level of computer skills? [Check (✓) one] — 16

NOT AT ALL EXPERIENCED ☐1
A LITTLE EXPERIENCED ☐2
FAIRLY EXPERIENCED ☐3
VERY EXPERIENCED ☐4

8. Please circle the appropriate number to indicate your overall level of satisfaction for each of the following areas:

	VERY DISSATISFIED	DISSATISFIED	SATISFIED	VERY SATISFIED	Please do n write here
CURRENT POSITION OR ASSIGNMENT	1	2	3	4	17
CURRENT SCHOOL PLACEMENT	1	2	3	4	18
WORKING IN THE DCPS	1	2	3	4	19
DAY TO DAY SUPPORT RECEIVED FROM YOUR SCHOOL PRINCIPAL	1	2	3	4	20
INITIAL TRAINING RECEIVED FROM THE CHAPTER 1 PROGRAM TO OPERATE YOUR LAB	1	2	3	4	21
INITIAL TRAINING RECEIVED FROM THE TSC® DIVISION OF HOUGHTON MIFFLIN TO USE THE DOLPHIN CAI PROGRAM	1	2	3	4	22
ONGOING SUPPORT RECEIVED FROM THE CHAPTER 1 PERSONNEL IN THE LEA OFFICE, DCPS	1	2	3	4	23
ONGOING SUPPORT RECEIVED FROM TSC® PERSONNEL VIA THE 800 PHONE NUMBER	1	2	3	4	24
THE MAJOR PURPOSE OF THE DOLPHIN CAI PROGRAM	1	2	3	4	25
THE METHOD FOR DETERMINING A STUDENT'S BEGINNING SKILL LEVEL WITH DOLPHIN	1	2	3	4	26
THE MATCH BETWEEN THE DOLPHIN SKILL LEVEL AND THE CBC/SPP SKILL	1	2	3	4	27
THE BASIC COMPUTER OPERATION PROCEDURES [start-up, back-ups, shut-down]	1	2	3	4	28
THE BASIC TROUBLESHOOTING STEPS	1	2	3	4	29

9. Please circle one number for each area to indicate your rating of the Dolphin computer hardware.

	POOR	FAIR	GOOD	EXCELLENT	Please do n write here
DEPENDABILITY	1	2	3	4	30
EASE OF USE	1	2	3	4	31
DURABILITY	1	2	3	4	32
CLARITY OF MONITOR IMAGES	1	2	3	4	33

10. Please circle one number for each area to indicate your rating of the Dolphin software.

	POOR	FAIR	GOOD	EXCELLENT	
DEPENDABILITY	1	2	3	4	34
EASE OF USE	1	2	3	4	35
CORRELATION OF SKILLS TO CBC LEVELS	1	2	3	4	36
CLARITY OF DIRECTIONS TO STUDENTS	1	2	3	4	37
CLARITY OF CONTENT TO STUDENTS	1	2	3	4	38
APPROPRIATENESS OF READING LEVELS FOR STUDENTS	1	2	3	4	39
NUMBER OF PRACTICE ITEMS	1	2	3	4	40
USEFULNESS OF SYSTEM REPORTS TO YOU	1	2	3	4	41
SYSTEM RESPONSE TIME TO INPUT BY STUDENTS	1	2	3	4	42
QUALITY OF STUDENT FEEDBACK	1	2	3	4	43
AMOUNT OF STUDENT FEEDBACK	1	2	3	4	44
TIMELINESS OF STUDENT FEEDBACK	1	2	3	4	45

11. Please circle one number for each area to indicate your rating of the Dolphin resource materials.

	POOR	FAIR	GOOD	EXCELLENT	
READABILITY	1	2	3	4	46
COMPREHENSIVENESS OF INFORMATION	1	2	3	4	47
CLARITY OF INFORMATION	1	2	3	4	48
ORGANIZATION/FORMAT	1	2	3	4	49
PHYSICAL DURABILITY	1	2	3	4	50

Please do r
write here

12. How adequate are the Curricula Reports, in general, in providing information for planning and revising instructional materials? [Circle one number]

WOULD YOU SAY THEY ARE ...	VERY INADEQUATE	INADEQUATE	ADEQUATE	VERY ADEQUATE	
	1	2	3	4	51

Please list the three most and three least useful Curricula Reports for planning and revising instructional materials. [most or least useful=1, second most or least useful=2, third most or least useful=3]

MOST USEFUL	LEAST USEFUL
1. ____________________	1. ____________________
2. ____________________	2. ____________________
3. ____________________	3. ____________________

13. How adequate are the Curricula Reports, in general, in providing information for record keeping? [Circle one number]

WOULD YOU SAY THEY ARE ...	VERY INADEQUATE	INADEQUATE	ADEQUATE	VERY ADEQUATE	
	1	2	3	4	52

Please list the three most and three least useful Curricula Reports for record keeping. [most or least useful=1, second most or least useful=2, third most or least useful=3]

MOST USEFUL	LEAST USEFUL
1. ____________________	1. ____________________
2. ____________________	2. ____________________
3. ____________________	3. ____________________

Please do r
write here

14. How adequate are the Curricula Reports, in general, in providing information for the collaboration conference? [Circle one number]

WOULD YOU SAY THEY ARE ...

VERY INADEQUATE	INADEQUATE	ADEQUATE	VERY ADEQUATE	
1	2	3	4	53

Please list the three most and three least useful Curricula Reports for the collaboratin conference. [most or least useful=1, second most or least useful=2, third most or least useful=3]

MOST USEFUL	LEAST USEFUL
1. ______________________	1. ______________________
2. ______________________	2. ______________________
3. ______________________	3. ______________________

15. How adequate are the Curricula Reports, in general, in providing information for monitoring student progress? [Circle one number]

WOULD YOU SAY THEY ARE ...

VERY INADEQUATE	INADEQUATE	ADEQUATE	VERY ADEQUATE	
1	2	3	4	54

Please list the three most and three least useful Curricula Reports for monitoring student progress. [most or least useful=1, second most or least useful=2, third most or least useful=3]

MOST USEFUL	LEAST USEFUL
1. ______________________	1. ______________________
2. ______________________	2. ______________________
3. ______________________	3. ______________________

Circle one number for each of the following:

	YES	NO	
16. Do you use Skill Review?	1	0	55
17. Do you use the Referral option?	1	0	56
18. Do you use the monitoring capability of the Dolphin system?	1	0	57
19. Do you use the computer generated worksheets?	1	0	58

Please do n
write here

20. What feature(s) would you like to see added to the Dolphin system?

____

____

21. How much down-time has been experienced with the Dolphin system? _____ NONE 59-60
_____ HOUR(S)
_____ DAY(S)
_____ WEEK(S)

If down-time was experienced, what was the cause? ________________

____

22. What do you like most about the Dolphin system?

____

____

23. What positive side effects or by-products can be attributed to the implementation of Dolphin CAI?

____

____

24. What negative side effects or by-products can be attributed to the implementation of Dolphin CAI?

____

____

25. What special problems have been encountered when entering lesson information?

____

____

26. Please describe your procedure for monitoring a student's progress while s/he is working with Dolphin.

____

____

27. Please circle one number for each to indicate your opinion of the following statements.

	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	Please do r write here
THE OBJECTIVES FOR USE OF THE DOLPHIN CAI IN THE CHAPTER 1 LAB ARE CLEAR TO THE TEACHERS.	1	2	3	4	61
THERE IS A GOOD WORKING RELATIONSHIP BETWEEN THE CLASSROOM TEACHERS AND THE CHAPTER 1 TEACHERS.	1	2	3	4	62
THE SHIFTS FROM ONE INSTRUCTIONAL MEDIUM TO ANOTHER DURING CHAPTER 1 CLASSES INTERFERE WITH LEARNING.	1	2	3	4	63
STUDENTS CANNOT LEARN WHAT THEY NEED TO KNOW WITH A COMPUTERIZED METHOD OF INSTRUCTION.	1	2	3	4	64
I KNOW WHAT IS EXPECTED OF ME IN USING DOLPHIN IN THE CHAPTER 1 LAB.	1	2	3	4	65
STUDENTS HURRY THROUGH THE DOLPHIN LESSONS TO GET THEM OVER WITH RATHER THAN TRYING TO LEARN.	1	2	3	4	66
STUDENTS ANSWER QUESTIONS WRONG INTENTIONALLY IN ORDER TO STAY ON THE DOLPHIN SYSTEM.	1	2	3	4	67
STUDENTS KNOW HOW WELL THEY ARE DOING IN A DOLPHIN LESSON.	1	2	3	4	68
STUDENTS FEEL THAT NO ONE REALLY CARES WHETHER THEY LEARN OR NOT USING THE DOLPHIN INSTRUCTION.	1	2	3	4	69
STUDENTS FEEL THEY DON'T HAVE ENOUGH TIME TO COMPLETE THE DOLPHIN MATERIAL.	1	2	3	4	70
A TEACHER OR AIDE IS READILY AVAILABLE FOR PROVIDING ASSISTANCE TO STUDENTS USING THE DOLPHIN SYSTEM.	1	2	3	4	71

28. Please circle one number for each to indicate your opinion of the following statements.

	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	Please do n write here
THE DOLPHIN TERMINAL IS EASY FOR STUDENTS TO OPERATE.	1	2	3	4	72
THE DOLPHIN TERMINAL TEXT DISPLAYS ARE ARRANGED IN A MANNER THAT IS CLEAR AND EASY TO READ.	1	2	3	4	73
THE AMOUNT OF MATERIAL PRESENTED ON THE DOLPHIN SCREEN AT ONE TIME IS AN APPROPRIATE LENGTH FOR MY CHAPTER 1 STUDENTS.	1	2	3	4	74
THE DOLPHIN CAI IS TOO IMPERSONAL FOR THE STUDENTS IN THE CHAPTER 1 LAB.	1	2	3	4	75
STUDENTS LEARN THE MATERIAL VERY QUICKLY USING THE DOLPHIN CAI INSTRUCTION	1	2	3	4	76
THERE IS A GOOD WORKING RELATIONSHIP BETWEEN THE TEACHER(S) AND AIDE IN THE CHAPTER 1 CLASSES.	1	2	3	4	77
BACKGROUND NOISE (VOICES, MOVEMENT, OPERATION OF EQUIPMENT) IS DISTRACTING TO STUDENTS IN THE CHAPTER 1 LAB.	1	2	3	4	78
THERE ARE SO MANY DEVICES (COMPUTER, TERMINALS, PRINTER) TO OPERATE IN THE CHAPTER 1 LAB THAT IT DISTRACTS FROM THE INSTRUCTION.	1	2	3	4	79
DOLPHIN CAI IS A VERY EFFECTIVE METHOD OF INSTRUCTION.	1	2	3	4	80

THANK YOU FOR YOUR COOPERATION.

An Evaluation of the TSC® Dolphin
Computer Assisted Instruction System in the
Chapter 1 Program of the District of Columbia Public Schools

TEACHER QUESTIONNAIRE

This is a questionnaire to gather information to assess the effectiveness of Dolphin CAI, as used in the Chapter 1 Program, in producing learning gains. Your help in completing this evaluation will be greatly appreciated.

The information will be used for research and analysis purposes only. Your responses will be held in strictest confidence. No individually identifiable data will be retained after completion and return of the questionnaire.

This evaluation is being conducted by the Human Resources Research Organization (HumRRO), Alexandria, Virginia. Questions or comments should be directed to Ms. Carolyn Harris at HumRRO, 549-3611.

Please fold the questionnaire and seal it in the attached envelope before returning it to the data collector.

It is essential that the questionnaire be completed and returned today to the data collector who is in your school.

Thank you for your cooperation.

________ 1-5

An Evaluation of the TSC® Dolphin Computer Assisted Instruction System in the Chapter 1 Program of the District of Columbia Public Schools

TEACHER QUESTIONNAIRE

PLEASE ANSWER EACH QUESTION BY CHECKING ONE BOX OR CIRCLING ONE NUMBER, UNLESS OTHERWISE INSTRUCTED. THIS QUESTIONNAIRE SHOULD REQUIRE ABOUT 15 MINUTES TO COMPLETE.

1. What is your current assignment? **[Check (✓) one]**

4TH GRADE TEACHER ☐1
5TH GRADE TEACHER ☐2 — 6
6TH GRADE TEACHER ☐3

2. What is your educational level? **[Check (✓) one]**

BACHELOR'S DEGREE ☐1
BACHELOR'S DEGREE PLUS 15 CREDITS TOWARD MASTER'S ☐2
MASTER'S DEGREE ☐3 — 7
MASTER'S DEGREE PLUS 30 CREDITS ☐4
MASTER'S DEGREE PLUS 60 CREDITS ☐5
DOCTORATE ☐6

3. What type of certification do you currently hold? **[Check (✓) one]**

PERMANENT ☐1
PROBATIONARY-STANDARD ☐2
PROBATIONARY-PROVISIONAL ☐3 — 8
TEMPORARY ☐4
TEMPORARY-EMERGENCY ☐5

4. How many years of experience do you have as a teacher? _____YEAR(S) 9-10

How many years have you been at your present school? _____YEAR(S) 11-12
[If less than 6 months, put zero.]

5. Do you serve in any of these roles? **[Circle one number for each]**

	YES	**NO**	Please do n write here.
CBC CHAIR	1	0	13
GRADE LEVEL CHAIR	1	0	14
AIMS COORDINATOR (local school)	1	0	15
TEAM LEADER	1	0	16
CLUB/ACTIVITY SPONSOR	1	0	17
SCHOOL REPRESENTATIVE TO PTA (or other parent group)	1	0	18
OTHER (Specify______________)	1	0	19

6. What are your currently active professional affiliations?
[Check (✓) YES or NO for each organization]

For each YES, circle the appropriate number to indicate your level of participation in that organization.

	YES	**NO**	**NOT AT ALL ACTIVE**	**A LITTLE ACTIVE**	**FAIRLY ACTIVE**	**VERY ACTIVE**	
WASHINGTON TEACHERS' UNION, AFL-CIO LOCAL #6	☐	☐ 0	1	2	3	4	20
ALLIANCE OF BLACK SCHOOL EDUCATORS	☐	☐ 0	1	2	3	4	21
INTERNATIONAL READING ASSOCIATION	☐	☐ 0	1	2	3	4	22
NATIONAL COUNCIL FOR TEACHERS OF MATHEMATICS	☐	☐ 0	1	2	3	4	23
ASSOCIATION FOR SUPERVISION AND CURRICULUM DEVELOPMENT	☐	☐ 0	1	2	3	4	24
OTHER (Specify___________)	☐	☐	1	2	3	4	25

7. What career related awards have you received? **[Circle one number for each]**

	YES	NO	Please do n write here
SUPERINTENDENT'S TEACHER INCENTIVE AWARD	1	0	26
SCHOOL INCENTIVE STAFF DEVELOPMENT AWARD (SISDA)	1	0	27
TEACHER OF THE YEAR AWARD	1	0	28
AGNES MEYER OUTSTANDING TEACHER AWARD (Washington Post)	1	0	29
MINI-GRANTS IN EDUCATION AWARD (Washington Post)	1	0	30
OTHER (Specify______________________________)	1	0	31

8. **Please rank these approaches from 1 to 3 to indicate which tendency characterizes your teaching approach the most to least. [most=1, intermediate=2, least=3]**

GIVE MORE TIME AND ATTENTION TO STUDENTS WITH LOW INITIAL ABILITIES	[_]	32
GIVE MORE TIME AND ATTENTION TO STUDENTS WITH HIGH INITIAL ABILITIES	[_]	33
GIVE EQUAL TIME AND ATTENTION TO ALL STUDENTS	[_]	34

9. **Please rank these approaches from 1 t 3 to indicate which tendency characterize your instructional method the most to least. [most=1, intermediate=2, least=3]**

HAVE STUDENTS OBTAIN INFORMATION FROM WRITTEN MATERIALS.	[_]	35
HAVE STUDENTS OBTAIN INFORMATION FROM PRACTICING WITH CONCRETE MATERIALS.	[_]	36
HAVE STUDENTS OBTAIN INFORMATION BY INFERENCES MADE BY DEALING WITH A LOT OF DIFFERENT MATERIALS.	[_]	37

10. How many times during an average month does your principal visit your classroom to observe or participate in students activities? _____ TIMES 38

11. How many times during an average month does your school counselor visit your classroom to observe student activities? _____ TIMES 39

12. How often during an average month does your school counselor visit your classroom to conduct career awareness activities for the students? _____ TIMES 40

13. **Please circle the appropriate number to indicate your overall level of satisfaction for each of the following areas:**

	VERY DISSATISFIED	DISSATISFIED	SATISFIED	VERY SATISFIED	Please do no write here.
CURRENT POSITION OR ASSIGNMENT	1	2	3	4	41
CURRENT SCHOOL PLACEMENT	1	2	3	4	42
WORKING IN THE DCPS	1	2	3	4	43
DAY TO DAY SUPPORT RECEIVED FROM YOUR SCHOOL PRINCIPAL	1	2	3	4	44
SUPPORT RECEIVED FROM THE CHAPTER 1 PERSONNEL IN YOUR SCHOOL	1	2	3	4	45

14. **Please circle one number for each to indicate how much impact you would say the Chapter 1 program in your school has had on improving student skills in the following areas:**

	HAS HAD NO IMPACT	HAS HAD A LITTLE IMPACT	HAS HAD SOME IMPACT	HAS HAD A LOT OF IMPACT	
READING SKILLS	1	2	3	4	46
LANGUAGE ARTS SKILLS	1	2	3	4	47
MATH COMPUTATION SKILLS	1	2	3	4	48
MATH PROBLEM SOLVING SKILLS	1	2	3	4	49
ATTENDANCE	1	2	3	4	50
CLASSROOM BEHAVIOR	1	2	3	4	51
ATTENTION SPAN	1	2	3	4	52
MOTIVATION	1	2	3	4	53
SELF-CONCEPT	1	2	3	4	54
ATTITUDE TOWARD SCHOOL	1	2	3	4	55

Please do n write here.

15. How are your students scheduled into the Chapter 1 lab? **[Check (✓) one]**

ALL SCHEDULED DURING ONE PERIOD ☐1
SCHEDULED DURING VARIOUS PERIODS ACCORDING TO CBC/SSP LEVEL ☐2 56
SCHEDULED DURING VARIOUS PERIODS AROUND MY CLASSROOM ACTIVITIES ☐3
OTHER (Specify________________________________) ☐4

16. How often do the students in your class who do not attend the Chapter 1 program say that they would like to be part of the program? **[Circle one number]**

WOULD YOU SAY THIS HAPPENS...	NEVER	RARELY	SOMETIMES	OFTEN
	1	2	3	4

IF SOMETIMES or OFTEN, what reasons do they give for wanting to be part of the program? 57

____

____

17. How often do the students in your class who do attend the Chapter 1 program say they don't like being part of the program? **[Circle one number]**

WOULD YOU SAY THIS HAPPENS...	NEVER	RARELY	SOMETIMES	OFTEN
	1	2	3	4

IF SOMETIMES or OFTEN, what reasons do they give for wanting to be part of the program? 58

____

____

18. How satisfied are you with each of the following areas of the Chapter 1 Program? Please circle one number for each to indicate your level of satisfaction.

	VERY DISSATISFIED	DISSATISFIED	SATISFIED	VERY SATISFIED	
THE CRITERIA USED TO IDENTIFY STUDENTS FOR PARTICIPATION IN THE CHAPTER 1 PROGRAM	1	2	3	4	59
THE MAJOR GOAL OF THE CHAPTER 1 PROGRAM	1	2	3	4	60
THE CLASSROOM SUPPORT SERVICES PROGRAM	1	2	3	4	61
THE S.T.A.R.S TUTORIAL PROGRAM	1	2	3	4	62
THE PROCEDURE FOR CONDUCTING A COLLABORATION CONFERENCE	1	2	3	4	63
THE CHARACTERISTICS OF THE LEARNING TRIPOD	1	2	3	4	64

19. **Please circle one number for each to indicate your opinion of the following statements.**

	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	Please do no write here.
The objectives of the Chapter 1 program are clear to me.	1	2	3	4	65
There is a good working relationship between the classroom teachers and the Chapter 1 teachers.	1	2	3	4	66
The shifts from one instructional medium to another during Chapter 1 classes interfere with learning.	1	2	3	4	67
Students cannot learn what they need to know with a computerized method of instruction.	1	2	3	4	68
There is a good working relationship between the teacher(s) and aide in the Chapter 1 class(es)	1	2	3	4	69
The Chapter 1 program is too disruptive to regular daily instruction.	1	2	3	4	70
Given a choice, I would prefer to work in a school that has computer-assisted instruction.	1	2	3	4	71

20. If your school has the Dolphin Computer-Assisted Instruction in the Chapter 1 lab, **please circle one number for each to indicate your opinion of the following statements.**

	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	
The Chapter 1 students at this school enjoy using the Dolphin system.	1	2	3	4	72
The objectives for use of the Dolphin CAI in the Chapter 1 lab are clear to the teachers.	1	2	3	4	73
Students feel that no one really cares whether they learn or not using the Dolphin instruction.	1	2	3	4	74

21. If your school has the Dolphin Computer-Assisted Instruction in the Chapter 1 lab, **please circle one number for each to indicate your opinion of the following statements.**

	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	Please do no write here.
Students feel they don't have enough time to complete the Dolphin material	1	2	3	4	75
Students learn the material very quickly using the Dolphin CAI instruction.	1	2	3	4	76
The Dolphin CAI is too impersonal for the students in the Chapter 1 lab.	1	2	3	4	77
Dolphin CAI is a very effective method of instruction.	1	2	3	4	78
I would recommend Dolphin for all students in grades 3-6, not just those in the Chapter I program.	1	2	3	4	

THANK YOU FOR YOUR COOPERATION.

An Evaluation of the TSC® Dolphin Computer Assisted Instruction System in the Chapter 1 Program of the District of Columbia Public Schools

PRINCIPAL QUESTIONNAIRE

This is a questionnaire to gather information to assess the effectiveness of Dolphin CAI, as used in the Chapter 1 Program, in producing learning gains. Your help in completing this evaluation will be greatly appreciated.

The information will be used for research and analysis purposes only. Your responses will be held in strictest confidence. No individually identifiable data will be retained after completion and return of the questionnaire.

This evaluation is being conducted by the Human Resources Research Organization (HumRRO), Alexandria, Virginia. Questions or comments should be directed to Ms. Carolyn Harris at HumRRO, 549-3611.

Please fold the questionnaire and seal it in the attached envelope before returning it to the data collector.

It is essential that the questionnaire be completed and returned today to the data collector who is in your school.

Thank you for your cooperation.

1-5

An Evaluation of the TSC® Dolphin Computer Assisted Instruction System in the Chapter I Program of the District of Columbia Public Schools

PRINCIPAL QUESTIONNAIRE

PLEASE ANSWER EACH QUESTION BY CHECKING (✓) ONE BOX OR CIRCLING ONE NUMBER UNLESS OTHERWISE INSTRUCTED. THIS QUESTIONNAIRE SHOULD REQUIRE ABOUT 15 MINUTES TO COMPLETE.

1. What is your educational level? [Check (✓) one].

MASTER'S DEGREE	☐1	
MASTER'S DEGREE PLUS 30 CREDITS	☐2	
MASTER'S DEGREE PLUS 60 CREDITS	☐3	6
DOCTORATE	☐4	

2. How many years of experience do you have as an administrator?_____YEAR(S) 7-8

3. How many years have you been at your present school? **[If less than 6 months, put zero.]** _____YEAR(S) 9-10

4. What are your currently active professional affiliations? **[Check (✓) YES or NO for each organization]** **For each YES, circle the appropriate number to indicate your level of participation in that organization.**

	YES	NO	NOT AT ALL ACTIVE	A LITTLE ACTIVE	FAIRLY ACTIVE	VERY ACTIVE	
ALLIANCE OF BLACK SCHOOL EDUCATORS	☐	☐ 0	1	2	3	4	11
INTERNATIONAL READING ASSOCIATION	☐	☐ 0	1	2	3	4	12
NATIONAL COUNCIL FOR TEACHERS OF MATHEMATICS	☐	☐ 0	1	2	3	4	13
NATIONAL ELEMENTARY SCHOOL PRINCIPALS ASSOCIATION	☐	☐ 0	1	2	3	4	14
ASSOCIATION FOR SUPERVISION AND CURRICULUM DEVELOPMENT	☐	☐ 0	1	2	3	4	15
COUNCIL OF SCHOOL OFFICERS	☐	☐	1	2	3	4	16
OTHER (Specify__________)	☐	☐ 0	1	2	3	4	17

5. **Please circle one number for each to indicate which resource programs operate in your school:**

	Yes	**NO**	Please do n write here
BUILDING RESOURCE TEACHER	1	0	18
READING RESOURCE TEACHER	1	0	19
LANGUAGE ARTS RESOURCE TEACHER	1	0	20
MATH RESOURCE TEACHER	1	0	21
SCIENCE RESOURCE TEACHER	1	0	22
ART RESOURCE TEACHER	1	0	23
MUSIC RESOURCE TEACHER	1	0	24
P.E. RESOURCE TEACHER	1	0	25
SPEECH RESOURCE TEACHER	1	0	26
FOREIGN LANGUAGE RESOURCE TEACHER	1	0	27
OTHER (Specify)____________________)	1	0	28

6. What is the staffing level of your guidance counselor? **[Circle one number]** 29

	FULL TIME	**HALF TIME**
	1	0

7. On the average during a month, how many times do you visit classroom to observe or participate in student activities? ______ TIMES 30

8. On the average during a month, how many times does the school counselor visit each classroom to observe student activities? ______ TIMES 31

9. On the average during a month, how many times does the school counselor conduct career awareness activities in each classroom? ______ TIMES 32

10. **Please check (✓) YES or NO to indicate the availability of activities at your school for student participation?**

For each YES, circle one number to indicate the students' level of participation?

	YES	NO	POOR	FAIR	GOOD	Please do not write here.
ART FAIR	☐	☐ 0	1	2	3	33
SCIENCE FAIR	☐	☐ 0	1	2	3	34
SPECIAL OLYMPICS	☐	☐ 0	1	2	3	35
IT'S ACADEMIC	☐	☐ 0	1	2	3	36
CHORAL GROUP	☐	☐ 0	1	2	3	37
INSTRUMENTAL GROUP	☐	☐ 0	1	2	3	38
CLUBS/ACTIVITY GROUPS	☐	☐ 0	1	2	3	39
PUBLICATIONS	☐	☐ 0	1	2	3	40
STUDENT COUNCIL	☐	☐ 0	1	2	3	41
INTRAMURAL ATHLETICS	☐	☐ 0	1	2	3	42
OTHER (Specify)_____)	☐	☐ 0	1	2	3	43

11. To what degree is each of these matters a problem in your school? **[Circle one number for each line]**

	NOT AT ALL	MINOR	MODERATE	SERIOUS	
Student absenteeism	1	2	3	4	44
Parents' lack of interest in students' progress	1	2	3	4	45
Teachers' lack of committment or motivation	1	2	3	4	46
Physical conflicts among students	1	2	3	4	47
Conflicts between students and teachers	1	2	3	4	48
Vandalism of school property	1	2	3	4	49

12. **Plese check (✓) YES or NO to indicate whether the following groups have been organized at your school?**

For each YES, circle one number to indicate how active the group is.

	YES	NO	NOT ACTIVE	A LITTLE ACTIVE	FAIRLY ACTIVE	VERY ACTIVE	Please do nc write here.
HOME AND SCHOOL ASSOCIATION	☐	☐ 0	1	2	3	4	50
PARENT-TEACHER ASSOCIATION	☐	☐ 0	1	2	3	4	51
PARENT SCHOOL COMMITTEE	☐	☐ 0	1	2	3	4	52
NEIGHBORHOOD SCHOOL COUNCIL	☐	☐ 0	1	2	3	4	53
OTHER (Specify____________)	☐	☐ 0	1	2	3	4	54

If any groups were marked as A LITTLE, FAIRLY, or VERY ACTIVE, circle one number for each to indicate whether they have contributed to your school in the following ways:

	YES	NO	
RAISED FUNDS FOR PURCHASE OF SPECIAL ITEM(S)	1	0	55
ASSISTED WITH CURRICULUM DECISIONS	1	0	56
ASSISTED WITH SCHOOL OPERATION DECISIONS	1	0	57
ARRANGED SPECIAL PROGRAMS (e.g., assemblies, field trips)	1	0	58
SERVED AS VOLUNTEERS (other than tutoring)	1	0	59
ARRANGED SPECIAL ACTIVITIES/DISPLAYS (e.g., National Education Week)	1	0	60
OTHER (Specify)____________________)	1	0	61

	YES	NO	
13. During the last three years has your school ever been singled-out to receive an award, special recognition, supplementary resources, or other special considerations? **[Circle one number]**	1	0	62

If YES, please specify honor____________________________________

	YES	NO	
14. Is your building used after hours for community activities? **[Circle one number]**	1	0	63

If YES, please specify activities____________________________________

Please do no
write here.

15. What was the percentage (%) of turnover in teaching staff this year? ______% 64-65

Compared to the previous year, how would you characterize this amount of turnover?

IT WAS LESS	IT WAS ABOUT THE SAME	IT WAS MORE	
☐	☐	☐	66

16. What was the percentage (%) of turnover in total student population this year? ______% 67-68

Compared to the previous year, how would you characterize this amount of turnover?

IT WAS LESS	IT WAS ABOUT THE SAME	IT WAS MORE	
☐	☐	☐	69

17. **Please circle the appropriate number to indicate your overall level of satisfaction for each of the following areas:**

	VERY DISSATISFIED	DISSATISFIED	SATISFIED	VERY SATISFIED	
CURRENT POSITION OR ASSIGNMENT	1	2	3	4	70
CURRENT SCHOOL PLACEMENT	1	2	3	4	71
WORKING IN THE DCPS	1	2	3	4	72
SUPPORT RECEIVED FROM THE CHAPTER 1 PERSONNEL IN YOUR SCHOOL	1	2	3	4	73
ONGOING SUPPORT RECEIVED FROM THE TEACHING STAFF IN YOUR SCHOOL	1	2	3	4	74
COOPERATION RECEIVED FROM THE TEACHING STAFF IN YOUR SCHOOL	1	2	3	4	75
COOPERATION RECEIVED FROM THE ADMINISTRATIVE STAFF IN YOUR SCHOOL	1	2	3	4	76
THE TEACHING EFFECTIVENESS OF YOUR 4TH GRADE TEACHERS	1	2	3	4	77
THE TEACHING EFFECTIVENESS OF YOUR 5TH GRADE TEACHERS	1	2	3	4	78
THE TEACHING EFFECTIVENESS OF YOUR 6TH GRADE TEACHERS	1	2	3	4	79
THE TEACHING EFFECTIVENESS OF YOUR CHAPTER 1 STAFF	1	2	3	4	80

Please do not write here.

18. About what percentage (%) of classroom teachers in this school use the school's media center at least twice a month? _____% 6-7

19. About what percentage (%) of resource teachers in this school use the school's media center at least twice a month? _____% 8-9

20. About what percentage (%) of students in this school use the school's media center at least twice a month? _____% 10-11

21. **Please circle one number for each to indicate the activities that are currently the responsibility of your media specialist.**

	YES	NO	
TEACHING LIBRARY SKILLS TO STUDENTS	1	0	12
ASSISTING STUDENTS WITH GROUP RESEARCH PROJECTS	1	0	13
ASSISTING STUDENTS WITH INDEPENDENT STUDIES	1	0	14
CONDUCTING A STORY TIME PERIOD FOR STUDENTS	1	0	15
PROVIDING CIRCULAR MATERIALS TO TEACHERS	1	0	16
CATALOGING & INVENTORYING SCHOOL-BASED A-V MATERIALS	1	0	17

22. How satisfied are you with each of the following areas of the Chapter 1 Program? **Please circle one number for each to indicate your level of satisfaction.**

	VERY DISSATISFIED	DISSATISFIED	SATISFIED	VERY SATISFIED	
THE CRITERIA USED TO IDENTIFY STUDENTS FOR PARTICIPATION IN THE CHAPTER 1 PROGRAM	1	2	3	4	18
THE MAJOR GOAL OF THE CHAPTER 1 PROGRAM	1	2	3	4	19
THE CLASSROOM SUPPORT SERVICES PROGRAM	1	2	3	4	20
THE S.T.A.R.S. TUTORIAL PROGRAM	1	2	3	4	21
THE PROCEDURE FOR CONDUCTING A COLLABORATION CONFERENCE	1	2	3	4	22
THE CHARACTERISTICS OF THE LEARNING TRIPOD	1	2	3	4	23

23. **Please circle one number for each to indicate your opinion of the following statements.**

	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	Please do no write here.
The objectives of the Chapter 1 Program are clear to me.	1	2	3	4	24
There is a good working relationship between the classroom teachers and the Chapter 1 teachers.	1	2	3	4	25
The shifts from one instructional medium to another during Chapter 1 classes interfere with learning.	1	2	3	4	26
Students cannot learn what they need to know with a computerized method of instruction.	1	2	3	4	27
There is a good working relationship between the teacher(s) and aide(s) in the Chapter 1 classes.	1	2	3	4	28
The Chapter 1 program is too disruptive to regular daily instruction.	1	2	3	4	29
The Chapter 1 program helps make students feel good about themselves.	1	2	3	4	30
Given a choice, I would prefer to work in a school that has computer-assisted instruction.	1	2	3	4	31

24. If your school has the Dolphin Computer-Assisted Instruction in the Chapter 1 lab, **please answer the next two sets of questions, please circle one number for each to indicate your opinion of the following statements.**

	STRONGLY DISAGREE	**DISAGREE**	**AGREE**	**STRONGLY AGREE**	Please do n write here.
The Chapter 1 students at this school enjoy using the Dolphin system.	1	2	3	4	32
The objectives for use of the Dolphin CAI in the Chapter 1 lab are clear to the teachers.	1	2	3	4	33
The Dolphin lesson content holds the interest of students.	1	2	3	4	34
The Dolphin terminals are inoperative too often, which wastes learning time.	1	2	3	4	35
Teachers know what is expected of them in using Dolphin in the Chapter 1 lab.	1	2	3	4	36
The Dolphin CAI is too impersonal for the students in the Chapter 1 lab.	1	2	3	4	37
Teachers received sufficient training in using Dolphin CAI.	1	2	3	4	38
Dolphin CAI is a very effective method of instruction.	1	2	3	4	39
Students learn the material very quickly using the Dolphin CAI instruction.	1	2	3	4	40
If I had a choice, I would not keep Dolphin at my school.	1	2	3	4	41
I would recommend Dolphin to other principals	1	2	3	4	42

25. Please circle one number for each to indicate how effective you think Dolphin would be for other groups of students.

	VERY INEFFECTIVE	**FAIRLY INEFFECTIVE**	**FAIRLY EFFECTIVE**	**VERY EFFECTIVE**	Please do no write here.
How effective do you think a Dolphin-like system would be for all students in grades 1 and 2?	1	2	3	4	43
How effective do you think a Dolphin-like system would be for all students in grades 3 through 6?	1	2	3	4	44
How effective do you think a Dolphin-like system would be for all students in junior high school?	1	2	3	4	45
How effective do you think a Dolphin-like system would be for all students in senior high school?	1	2	3	4	46

THANK YOU FOR YOUR COOPERATION.

(Dolphin)
An Evaluation of the TSC Dolphin
Computer Assisted Instruction System in the
Chapter 1 Program of the District of Columbia Public Schools

Student Questionnaire

[Chapter 1 Teacher: When you read this questionnaire to your students, please strive for neutrality in your voice so that no particular answer is emphasized. The question marks at the end of each response are simply there to guide your inflection. Please read both plain and bold text (except for bracketed instructions). When you are finished, have a student collect the answer sheets and give them directly to the data collector, who will seal them in an envelope. This is extremely important because it demonstrates to the students that the answer sheets are not going to be looked at by you or anyone else at your school. Thanks so much for your assistance.]

I'm going to ask you some questions about the program in this lab. On the sheet that I just handed out, I want you to circle what you think is the best answer for each question. Please use a pencil to mark your answers.

There are no right or wrong answers to these questions, so you don't have to worry about getting the answers right or wrong. We just want to know how you feel. Nobody in the school will ever know how you answered the questions, and your answers will not be graded in any way. I don't even want to know how you answered the questions, so don't write your names on the answer sheets.

You don't have to answer any of these questions if you don't want to. Just leave that answer blank. Remember, we just want to know what you think about this program

Are there any questions before I begin? *[Answer any questions, then say:]* The first questions are just to let us know about you. Question number one:

1. Are you a boy or a girl?
[Repeat question]

Circle one answer for number one.

Number 2. What grade are you in this year?
3rd?
4th?
5th?
6th?
[Repeat question - not responses, unless needed]

Circle your grade by the number two.

These questions are about the Chapter 1 lab that you're in now. The way this class is set-up, you usually do three activities: You work directly with the teacher; you work with the computer; and, you work on your own.

Number 3. Listed on your sheet are three sentences that describe these activities. They are:

I worked directly with the teacher.
I worked with the computer.
I worked on my own.

Next to each sentence is a line; put a one by the thing you did first today. Then put a two by the thing you did second, if you did a second activity. And, then put a three by the thing you did third, if you did a third activity.

[Repeat directions]

Some students learn better doing some things than other things. These next questions are about how much you feel you learn about math and reading during the different parts of this class. Get ready to circle A, B, or C on your sheet.

Number 4. How much about math do you feel you learn when you work directly with the teacher?

A. I learn very little about math?
B. I learn some about math?
C. I learn a lot about math?

[Repeat question - not responses, unless needed]

Circle the A, B, or C on your sheet by the number four.

Number 5. How much about math do you feel you learn when you work with the computer?

A. I learn very little about math?
B. I learn some about math?
C. I learn a lot about math?

[Repeat question - not responses, unless needed]

Circle the A, B, or C on your sheet by the number five.

Number 6. How much about math do you feel you learn when you work on your own?

A. I learn very little about math?
B. I learn some about math?
C. I learn a lot about math?

[Repeat question - not responses, unless needed]

Circle the A, B, or C on your sheet by the number six.

Number 7. How much about reading do you feel you learn when you work directly with the teacher?

A. I learn very little about reading?
B. I learn some about reading?
C. I learn a lot about reading?

[Repeat question] - not responses, unless needed

Circle A, B, or C on your sheet by the number seven.

Number 8. How much about reading do you feel you learn when you work with the computer?

A. I learn very little about reading?
B. I learn some about reading?
C. I learn a lot about reading?

[Repeat question - not responses, unless needed]

Circle A, B, or C on your sheet by the number eight.

Number 9. How much about reading do you feel you learn when you work on your own?

A. I learn very little about reading?
B. I learn some about reading?
C. I learn a lot about reading?

[Repeat question - not responses, unless needed]

Circle A, B, or C on your sheet by the number nine.

Some students like going to their regular classes better than going to the Chapter 1 lab, and some like going to the Chapter 1 lab better.

Number10.If you were going to give your regular class a grade, how would you grade it?
A - for excellent?
B - for good?
C - for fair?
D - for poor?
F - for fail?
[Repeat question - not responses, unless needed]

Circle A, B, C, D, or F by the number ten.

Number11.If you were going to give your Chapter1 lab a grade, how would you grade it?
A - for excellent?
B - for good?
C - for fair?
D - for poor?
F - for fail?
[Repeat question - not responses, unless needed]

Circle A, B, C, D, or F by the number eleven.

Number12.If you were told that you were going to be in a Chapter 1 lab like this one next year, how would you feel?
A. I would not like it?
B. I would like it some?
C. I would like it a lot?
[Repeat question - not responses, unless needed]

Circle A, B, or C by the number twelve.

Sometimes students like to think about what they'll do in the future. For the next two sentences, if you agree with what I read, circle "yes" on your paper; if you don't agree with what I read, circle "no".

Number13. I want to finish high school.
[Repeat sentence]

Circle "yes" or "no" by the number thirteen on your answer sheet.

Number14. I want to go on to college after high school.

[Repeat sentence]

Circle "yes" or "no" by the number fourteen.

Number15. How would you like to have a job where you could use a typewriter?

A. I would not like it?
B. I would like it some?
C. I would like it a lot?

[Repeat question - not responses, unless needed]

Circle A, B, or C by the number fifteen.

Number16. How would you like to have a job where you could use a computer?

A. I would not like it?
B. I would like it some?
C. I would like it a lot?

[Repeat question - not responses, unless needed]

Circle A, B, or C by the number sixteen.

Number17. How would you like to have a job where you could use tools?

A. I would not like it?
B. I would like it some?
C. I would like it a lot?

[Repeat question - not responses, unless needed]

Circle A, B, or C by the number seventeen.

The next sentences are about how you feel. If you agree with what I read, circle "yes"; if you don't agree with what I read, circle "no". Remember there are no right or wrong answers.

Number18. I like coming to school.

[Repeat sentence]

Circle "yes" or "no" by the number eighteen.

Number19. I think getting good grades at school is important.
[Repeat sentence]

Circle "yes" or "no" by the number nineteen.

Number20. Does your family have a computer at home?
[Repeat question]

Circle "yes" or "no" by the number twenty.

Number21. Do you think that working with the Dolphin computer at school will help you get a better job someday?
[Repeat question]

Circle "yes" or "no" by the number twenty-one.

Number22. Did you ever use a computer regularly before you started working with the Dolphin computer?
[Repeat question]

Circle "yes" or "no" by the number twenty-two.

Number23. How do you feel about working with the Dolphin computer?
A. I do not like it?
B. I like it some?
C. I like it a lot?
[Repeat question - not responses, unless needed]

Circle A, B, or C by the number twenty-three.

Number24. What do your parents think about you working with the Dolphin computer?
A. They don't know about it?
B. They don't care one way or the other?
C. They like the idea?
[Repeat question - not responses, unless needed]

Circle A, B, or C by the number twenty-four.

Thanks very much for answering these questions.

(Dolphin)

Chapter 1

Student Questionnaire

1. Boy Girl

2. 3rd 4th 5th 6th

3. ____ I worked directly with the teacher.
   ____ I worked with the computer.
   ____ I worked on my own.

4. When I work directly with the teacher,
   A. I learn very little about math.
   B. I learn some about math.
   C. I learn a lot about math.

5. When I work with the computer,
   A. I learn very little about math.
   B. I learn some about math.
   C. I learn a lot about math.

6. When I work on my own,
   A. I learn very little about math.
   B. I learn some about math.
   C. I learn a lot about math.

7. When I work directly with the teacher,
   A. I learn very little about reading.
   B. I learn some about reading.
   C. I learn a lot about reading.

8. When I work with the computer,
   A. I learn very little about reading.
   B. I learn some about reading.
   C. I learn a lot about reading.

9. When I work on my own,
   A. I learn very little about reading.
   B. I learn some about reading.
   C. I learn a lot about reading.

10. A - for excellent
    B - for good
    C - for fair
    D - for poor
    F - for fail

11. A - for excellent
    B - for good
    C - for fair
    D - for poor
    F - for fail

12. A. I would not like it.
    B. I would like it some.
    C. I would like it a lot.

13. Yes No

14. Yes No

15. A. I would not like it.
    B. I would like it some.
    C. I would like it a lot.

16. A. I would not like it.
    B. I would like it some.
    C. I would like it a lot.

17. A. I would not like it.
    B. I would like it some.
    C. I would like it a lot.

18. Yes No

19. Yes No

20. Yes No

21. Yes No

22. Yes No

23. A. I do not like it.
    B. I like it some.
    C. I like it a lot.

24. A. They don't know about it.
    B. They don't care one way or the other..
    C. They like the idea.

Thanks very much for answering these questions.

(non-Dolphin)

An Evaluation of the TSC® Dolphin
Computer Assisted Instruction System in the
Chapter 1 Program of the District of Columbia Public Schools

Student Questionnaire

[Chapter 1 Teacher: When you read this questionnaire to your students, please strive for neutrality in your voice so that no particular answer is emphasized. The question marks at the end of each response are simply there to guide your inflection. Please read both plain and bold text (except for bracketed instructions). When you are finished, have a student collect the answer sheets and give them directly to the data collector, who will seal them in an envelope. This is extremely important because it demonstrates to the students that the answer sheets are not going to be looked at by you or anyone else at your school. Thanks so much for your assistance.]

I'm going to ask you some questions about the program in this lab. On the sheet that I just handed out, I want you to circle what you think is the best answer for each question. Please use a pencil to mark your answers.

There are no right or wrong answers to these questions, so you don't have to worry about getting the answers right or wrong. We just want to know how you feel. Nobody in the school will ever know how you answered the questions, and your answers will not be graded in any way. I don't even want to know how you answered the questions, so don't write your names on the answer sheets.

You don't have to answer any of these questions if you don't want to. Just leave that answer blank. Remember, we just want to know what you think about this program

Are there any questions before I begin? *[Answer any questions, then say:]*
The first questions are just to let us know about you. Question number one:

1. Are you a boy or a girl?
[Repeat question]

Circle one answer for number one.

Number 2. **What grade are you in this year?**
3rd?
4th?
5th?
6th?
[Repeat question - not responses, unless needed]

Circle your grade by the number two.

These questions are about the Chapter ! lab that you're in now. The way this class is set-up, you usually do three activities: You work directly with the teacher; you work with some of the equipment - like the listening station, filmstrip projector, tape recorder, or calculators; and, you work on your own.

Number 3. Listed on your sheet are three sentences that describe these activities. They are:

I worked directly with the teacher.
I worked with the equipment in our room.
I worked on my own.

Next to each sentence is a line; put a one by the thing you did first today. Then put a two by the thing you did second, if you did a second activity. And, then put a three by the thing you did third, if you did a third activity.

[Repeat directions]

Some students learn better doing some things than other things. These next questions are about how much you feel you learn about math and reading during the different parts of this class. Get ready to circle A, B, or C on your sheet.

Number 4. How much about math do you feel you learn when you work directly with the teacher?

A. I learn very little about math?
B. I learn some about math?
C. I learn a lot about math?

[Repeat question - not responses, unless needed]

Circle the A, B, or C on your sheet by the number four.

Number 5. How much about math do you feel you learn when you work with the equipment in our room?

A. I learn very little about math?
B. I learn some about math?
C. I learn a lot about math?

[Repeat question - not responses, unless needed]

Circle the A, B, or C on your sheet by the number five.

Number 6. How much about math do you feel you learn when you work on your own?

A. I learn very little about math?
B. I learn some about math?
C. I learn a lot about math?

[Repeat question - not responses, unless needed]

Circle the A, B, or C on your sheet by the number six.

Number 7. How much about reading do you feel you learn when you work directly with the teacher?

A. I learn very little about reading?
B. I learn some about reading?
C. I learn a lot about reading?

[Repeat question] - not responses, unless needed

Circle A, B, or C on your sheet by the number seven.

Number 8. How much about reading do you feel you learn when you work with the equipment in our room?

A. I learn very little about reading?
B. I learn some about reading?
C. I learn a lot about reading?

[Repeat question - not responses, unless needed]

Circle A, B, or C on your sheet by the number eight.

Number 9. How much about reading do you feel you learn when you work on your own?

A. I learn very little about reading?
B. I learn some about reading?
C. I learn a lot about reading?

[Repeat question - not responses, unless needed]

Circle A, B, or C on your sheet by the number nine.

Some students like going to their regular classes better than going to the Chapter 1 lab, and some like going to the Chapter 1 lab better.

Number10.If you were going to give your regular class a grade, how would you grade it?
A - for excellent?
B - for good?
C - for fair?
D - for poor?
F - for fail?
[Repeat question - not responses, unless needed]

Circle A, B, C, D, or F by the number ten.

Number11.If you were going to give your Chapter1 lab a grade, how would you grade it?
A - for excellent?
B - for good?
C - for fair?
D - for poor?
F - for fail?
[Repeat question - not responses, unless needed]

Circle A, B, C, D, or F by the number eleven.

Number12.If you were told that you were going to be in a Chapter 1 lab like this one next year, how would you feel?
A. I would not like it?
B. I would like it some?
C. I would like it a lot?
[Repeat question - not responses, unless needed]

Circle A, B, or C by the number twelve.

Sometimes students like to think about what they'll do in the future. For the next two sentences, if you agree with what I read, circle "yes" on your paper; if you don't agree with what I read, circle "no".

Number13. I want to finish high school.
[Repeat sentence]

Circle "yes" or "no" by the number thirteen on your answer sheet.

Number 14. I want to go on to college after high school.
[Repeat sentence]

Circle "yes" or "no" by the number fourteen.

Number 15. How would you like to have a job where you could use a typewriter?

A. I would not like it?
B. I would like it some?
C. I would like it a lot?

[Repeat question - not responses, unless needed]

Circle A, B, or C by the number fifteen.

Number 16. How would you like to have a job where you could use a computer?

A. I would not like it?
B. I would like it some?
C. I would like it a lot?

[Repeat question - not responses, unless needed]

Circle A, B, or C by the number sixteen.

Number 17. How would you like to have a job where you could use tools?

A. I would not like it?
B. I would like it some?
C. I would like it a lot?

[Repeat question - not responses, unless needed]

Circle A, B, or C by the number seventeen.

The next sentences are about how you feel. If you agree with what I read, circle "yes"; if you don't agree with what I read, circle "no". Remember there are no right or wrong answers.

Number 18. I like coming to school.
[Repeat sentence]

Circle "yes" or "no" by the number eighteen.

Number19. I think getting good grades at school is important.
[Repeat sentence]

Circle "yes" or "no" by the number nineteen.

Number20. Does your family have a computer at home?
[Repeat question]

Circle "yes" or "no" by the number twenty.

Number21. Do you think that if you worked with a computer at school it would help you get a better job someday?
[Repeat question]

Circle "yes" or "no" by the number twenty-one.

Thanks very much for answering these questions.

(non-Dolphin)

Chapter 1

Student Questionnaire

1. Boy Girl

2. 3rd 4th 5th 6th

3. ____ I worked directly with the teacher.
   ____ I worked with the equipment.
   ____ I worked on my own.

4. When I work directly with the teacher,
   A. I learn very little about math.
   B. I learn some about math.
   C. I learn a lot about math.

5. When I work with the equipment in our room,
   A. I learn very little about math.
   B. I learn some about math.
   C. I learn a lot about math.

6. When I work on my own,
   A. I learn very little about math.
   B. I learn some about math.
   C. I learn a lot about math.

7. When I work directly with the teacher,
   A. I learn very little about reading.
   B. I learn some about reading.
   C. I learn a lot about reading.

8. When I work with the equipment in our room,
   A. I learn very little about reading.
   B. I learn some about reading.
   C. I learn a lot about reading.

9. When I work on my own,
   A. I learn very little about reading.
   B. I learn some about reading.
   C. I learn a lot about reading.

10. A - for excellent
    B - for good
    C - for fair
    D - for poor
    F - for fail

11. A - for excellent
    B - for good
    C - for fair
    D - for poor
    F - for fail

12. A. I would not like it.
    B. I would like it some.
    C. I would like it a lot.

13. Yes No

14. Yes No

15. A. I would not like it.
    B. I would like it some.
    C. I would like it a lot.

16. A. I would not like it.
    B. I would like it some.
    C. I would like it a lot.

17. A. I would not like it.
    B. I would like it some.
    C. I would like it a lot.

18. Yes No

19. Yes No

20. Yes No

21. Yes No

Thanks very much for answering these questions.

An Evaluation of the TSC® Dolphin Computer Assisted Instruction System
in the Chapter 1 Program of the District of Columbia Public School

OBSERVATION CHECKLIST

PERIOD NO.______ Ask teacher what grades students will be in this period_______________
[Ask teacher to identify locations where each component of the Learning Tripod occurs.]

BEGINNING TIME________ **ENDING TIME**________

NUMBER OF STUDENTS PRESENT

	3rd	4th	5th	6th
M				
F				

NUMBER OF STUDENTS ABSENT

	3rd	4th	5th	6th
M				
F				

	1-3 MIN. LATE	4-5 MIN. LATE	MORE THAN 5 MIN. LATE
PUNCTUALITY OF STUDENTS			

Special comments:____

During Minutes 0-10	DOLPHIN/MEDIA	INDEPENDENT	DIRECT
No. of Students in Each Group			
No. of Students Off-Task At 5 Min. Point			
No. of Disruptive Disciplinary Problems			
No. of Times Students Asked for Assistance			
No. of Times Students Were Assisted or Were Interacting With Teacher or Aide			
No. of Students Who Received Positive Reinforcement			
No. of Students Who Didn't Seem To Know How to Operate Dolphin Or Seemed Lost or Disinterested			

During Minutes 11-20

	DOLPHIN/MEDIA	INDEPENDENT	DIRECT
No. of Students in Each Group	-------------	-------------	-------------
No. of Students Off-Task At 15 Min. Point	-------------	-------------	-------------
No. of Disruptive Disciplinary Problems	-------------	-------------	-------------
No. of Times Students Asked for Assistance	-------------		
No. of Times Students Were Assisted or Were Interacting With Teacher or Aide	-------------		
No. of Students Who Received Positive Reinforcement	-------------		
No. of Students Who Didn't Seem To Know How to Operate Dolphin Or Seemed Lost or Disinterested	-------------		

During Minutes 21-30

	DOLPHIN/MEDIA	INDEPENDENT	DIRECT
No. of Students in Each Group	-------------	-------------	-------------
No. of Students Off-Task At 25 Min. Point	-------------	-------------	-------------
No. of Disruptive Disciplinary Problems	-------------	-------------	-------------
No. of Times Students Asked for Assistance	-------------		
No. of Times Students Were Assisted or Were Interacting With Teacher or Aide	-------------		
No. of Students Who Received Positive Reinforcement	-------------		
No. of Students Who Didn't Seem To Know How to Operate Dolphin Or Seemed Lost or Disinterested	-------------		

CIRCLE ONE NUMBER TO DESCRIBE THE EASE OF TRANSITION FROM ONE COMPONENT TO ANOTHER.	VERY DISRUPTIVE	FAIRLY DISRUPTIVE	FAIRLY SMOOTH	VERY SMOOTH
	1	2	3	4

HOW DID THE COMPONENTS OPERATE? [CIRCLE NUMBER]

EACH COMPONENT OCCURRING SEPARATELY IN SUCCESSION WITH ENTIRE CLASS ROTATING AS A UNIT.	1
ANY TWO OF DIRECT INSTRUCTION ( ), INDEPENDENT LEARNING ( ), AND DOLPHIN OR MEDIA ( ) OCCURRING SIMULTANEOUSLY. CHECK THE TWO.	2
DIRECT INSTRUCTION, INDEPENDENT LEARNING, AND DOLPHIN OR MEDIA GROUPS ALL OCCURRING SIMULTANEOUSLY WITH SMALL GROUPS OF STUDENTS IN EACH.	3
DIRECT INSTRUCTION FOR ENTIRE CLASS FOLLOWED/PRECEDED BY SIMULTANEOUS SMALLER GROUPS OF INDEPENDENT AND DOLPHIN OR MEDIA.	4
OTHER - SPECIFY______________________________	5

CIRCLE ONE NUMBER FOR EACH.	NONE	A LITTLE	A FAIR AMOUNT	VERY MUCH
HOW MUCH DID THE STUDENTS SEEM TO LIKE AND RESPECT THE TEACHER?	1	2	3	4
HOW MUCH DID THE STUDENTS SEEM TO LIKE AND RESPECT THE AIDE?	1	2	3	4
WHAT WAS THE GENERAL LEVEL OF CONTROL THAT THE TEACHER (or teacher and aide) HAD OVER THE CLASSROOM?	1	2	3	4

IN DOLPHIN AND NON-DOLPHIN SCHOOLS, DESCRIBE THE MATERIALS USED DURING INDEPENDENT LEARNING.

IN NON-DOLPHIN SCHOOLS, DESCRIBE THE MATERIALS/EQUIPMENT USED DURING INSTRUCTIONAL MEDIA.

GIVE A GENERAL OVERALL RATING OF THE CHAPTER 1 PERIOD AS A LEARNING EXPERIENCE.	VERY POOR	POOR	GOOD	VERY GOOD	EXCELLENT
	1	2	3	4	5

COMMENTS REGARDING ADMINISTRATION OF STUDENT QUESTIONNAIRE.

GENERAL COMMENTS REGARDING OBSERVATION OF THIS PERIOD.

BEST COPY AVAILABLE

DISTRICT OF COLUMBIA PUBLIC SCHOOLS • DIVISION OF QUALITY ASSURANCE
THE EVALUATION SYSTEM READING AND MATHEMATICS PROGRAM DATA COLLECTION FORM #301

STUDENT'S NAME Print Last Name—skip one space—print as much of First Name as possible

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STUDENT ID NUMBER

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SCHOOL CODE

☐	☐	☐
⓪	⓪	⓪
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INSTRUCTIONS

USE NO. 2 PENCIL ONLY

- MAKE HEAVY BLACK MARKS THAT COMPLETELY FILL THE CIRCLE.
- ERASE CLEANLY ANY ANSWERS YOU WISH TO CHANGE.
- MAKE NO STRAY MARKINGS OF ANY KIND.

CORRECT MARK ●
INCORRECT MARKS ⊗ ✓ ◐ ⊙

School Year 19 __________ Date __________

1. Indicate the sex of this student:
○ MALE ○ FEMALE

2. Did this student receive Chapter I services during the current semester?
○ YES ○ NO

3. Is this student an identified special education student?
○ YES ○ NO

If yes, complete a and b.

a. Does this student participate in reading to the same extent as regular students?
○ YES ○ NO

b. Does this student participate in mathematics to the same extent as regular students?
○ YES ○ NO

If the response to 3a and/or 3b is "NO" then omit items 4 and 5.

CLASS CODE

☐	☐	☐	☐	☐	☐	☐	☐	☐
⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪	⓪
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⑧	⑧	⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨	⑨	⑨

4. Indicate the student's current grade placement and instructional levels for the beginning and end of current semester.

		Reading Instructional Level	Mathematics Instructional Level
CURRENT GRADE ① ② ③ ④ ⑤ ⑥ Ⓐ Ⓑ Ⓣ	BEGINNING OF CURRENT SEMESTER	① ② ③ ④ ⑤ ⑥ Ⓐ Ⓑ	① ② ③ ④ ⑤ ⑥ Ⓐ Ⓑ
	END OF CURRENT SEMESTER	① ② ③ ④ ⑤ ⑥ ⑦ Ⓐ Ⓑ	① ② ③ ④ ⑤ ⑥ ⑦ Ⓐ Ⓑ

Indicate the mastery (+) or non-mastery (−) of the student's instructional levels for the end of the current semester.

MASTERY

Reading ⊕ ⊖
Mathematics ⊕ ⊖

5. Indicate the student's next semester grade placement and instructional levels.

		Reading Instructional Level	Mathematics Instructional Level
NEXT SEMESTER GRADE ① ② ③ ④ ⑤ ⑥ ⑦ Ⓐ Ⓑ Ⓣ	NEXT SEMESTER	① ② ③ ④ ⑤ ⑥ ⑦ Ⓐ Ⓑ	① ② ③ ④ ⑤ ⑥ ⑦ Ⓐ Ⓑ

6. Print and fill in the circle to indicate the number of days this student was absent during the current semester.

ABSENCES

☐	☐
⓪	⓪
①	①
②	②
③	③
④	④
⑤	⑤
⑥	⑥
⑦	⑦
⑧	⑧
⑨	⑨

7. If this student will be entering another school next semester as a result of normal promotion (to a middle school or to a junior high school) print and fill in the circle to indicate the school code of the receiving school. Write the school name here

RECEIVING SCHOOL CODE

☐	☐	☐
⓪	⓪	⓪
①	①	①
②	②	②
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④	④	④
⑤	⑤	⑤
⑥	⑥	⑥
⑦	⑦	⑦
⑧	⑧	⑧
⑨	⑨	⑨

____
SCHOOL NAME

DO NOT WRITE IN THIS AREA

105

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8. (For Chapter I schools only)
Considering the needs of the students in your classroom, which priority would you assign to this student for reading and mathematics instructional services offered through the Chapter I program?
(Mark only one for each subject)

READING		MATHEMATICS
○	NO SPECIAL NEED	○
○	LOW DEGREE OF NEED	○
○	MODERATE DEGREE OF NEED	○
○	HIGH DEGREE OF NEED	○

9. As this student's family or homeroom teacher, are you also his/her regular teacher of the following subjects?
(Mark one for each subject)

READING		MATHEMATICS
○	YES	○
○	NO	○

10. What is your assessment of this student's interest in:
(Mark one for each subject)

READING		MATHEMATICS
○	VERY INTERESTED	○
○	SOMEWHAT INTERESTED	○
○	NOT INTERESTED	○

11a. Indicate for this student the current most frequently used reading and mathematics materials by gridding the proper codes below. A list of the materials and codes has been provided.

READING			
	⓪	⓪	⓪
	①	①	①
	②	②	②
	③	③	③
	④	④	④
	⑤	⑤	⑤
	⑥	⑥	⑥
	⑦	⑦	⑦
	⑧	⑧	⑧
	⑨	⑨	⑨

MATHEMATICS			
	Ⓐ	⓪	⓪
	Ⓑ	①	①
	Ⓒ	②	②
	Ⓓ	③	③
	Ⓔ	④	④
	Ⓕ	⑤	⑤
	Ⓖ	⑥	⑥
	Ⓗ	⑦	⑦
		⑧	⑧
		⑨	⑨

11b. To what extent are these materials indicative of what was used all year for this student?
(Mark one for each subject)

READING		MATHEMATICS
○	VERY SIMILAR	○
○	SOMEWHAT SIMILAR	○
○	NOT SIMILAR	○
○	DON'T KNOW	○

12. From which of the following sources other than the regular reading and mathematics teacher has this student received extra help?
(Mark all that apply for each subject)

READING		MATHEMATICS
	a. During the regular school day	
○	SPECIALIST/RESOURCE TEACHER	○
○	TEACHER AIDE	○
○	PEER TUTOR	○
○	JR./SR. HIGH TUTOR	○
○	COLLEGE TUTOR	○
○	PARENT/COMMUNITY TUTOR	○
○	OPERATION RESCUE	○
○	OTHER	○
	b. After school	
○	OPERATION RESCUE	○
○	STARS (Chapter 1)	○
○	OTHER	○

13. How often each week does this student usually receive extra help?
(Mark one for each subject)

READING		MATHEMATICS
○	NONE	○
○	1 DAY	○
○	2 DAYS	○
○	3 DAYS	○
○	4 DAYS	○
○	5 DAYS	○

14. Is this student repeating the current grade?

○ YES NO ○

15. Has this student repeated a prior grade?

○ YES NO ○

16. To your knowledge is this student's background of experiences adequate to enable him/her to function successfully in your classroom?

○ YES NO ○

17. Including this month, how many months has this student been in your homeroom or family class this year?
(Mark only one)

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

MAKE NO
STRAY
MARKS
ON THIS
FORM

Appendix B

Statistical Analyses

The following pages contain a detailed discussion of the statistical analysis method for the Dolphin evaluation.

Statistical Analyses

Selection of measures of Chapter 1 progam effectiveness

There are, no doubt, large numbers of potential measures that could be used to measure the effectiveness of a complex program such as Chapter 1. While we could not possibly measure all aspects of Chapter 1 program effectiveness, we could and did obtain a comprehensive sample of measures. This was accomplished through selecting one or more criterion measures from each of the survey instruments and from available school records.

The selection of measures of program effectiveness from the survey instruments was facilitated through factor analyses and item analyses of possible criterion measures for each instrument. These helped the selection process by identifying variables that were essentially measuring the same thing (and were therefore redundant), or by indicating how a given measure could be made more reliable (by eliminating or adding components to the measure).

The content of the measures also was considered. In the judgment of the authors, some measures were more important indexes of overall Chapter 1 effectiveness than others. While no one criterion by itself could adequately measure Chapter 1 program effectiveness, a balanced set of measures, looking at Chapter 1 from a number of different perspectives, would allow the impact of Dolphin presence or absence to be fairly evaluated.

Table B1 lists the 18 criterion measures that were selected and the source for each. The largest number of measures ([illegible]), was taken from the Chapter 1 student questionnaire. School records provided four measures, and the remaining criterion measures were derived from the survey instruments. They present points of view of the Chapter 1 program from the regular fourth, fifth, and sixth grade teachers, the Chapter 1 teachers, the school principals, and the trained HumRRO observers (data collectors) who spent a day at each school.

Table B1

Selected Measures of Chapter 1 Program Effectiveness

Student Questionnaire [a]

Learns about math when working with Dolphin/equipment in room
Learns about reading when working with Dolphin/equipment in room
Would like to be in similar Chapter 1 program next year
Wants to go to college after high school
Would like to have a job using a computer
Likes coming to school

Student Records [a]

Reading gain score [b]
Math gain score [b]
Teacher assessment of student interest in reading and math
Number of days student absence during current semester

Regular Teacher Questionnaire

Impact of Chapter 1 program on students' reading and math skills and on behavior
Assessment of frequency that non-Chapter 1 students express desire to be part of Chapter 1 program

Chapter 1 Teacher Questionnaires

Impact of Chapter 1 program on students' reading and math skills and on behavior
Ranking of contribution of CAI/Instructional Media Component to student interest in learning, career awareness, and actual student learning
Ranking of CAI/Instructional Media Component based on students' comments about liking

Principal Questionnaire

Satisfaction with areas of the Chapter 1 program
Satisfaction with teaching effectiveness of Chapter 1 staff

Observation Checklist

Data Collector rating of ease of transition from one component of Learning Tripod to another, students' level of respect for the Chapter 1 teacher, general level of control of the Chapter 1 teacher, and Chapter 1 period as a learning experience

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[a] Average or mean student values within grade and within school were used as the measures of Chapter 1 program effectiveness.

[b] Gain scores were obtained through applying formulas given in Lord (1967), which control the gain scores for both the unreliability of the initial and final scores. The gain scores were calculated separately for each grade by pooling the data across Dolphin/non-Dolphin schools and are expressed in terms of grade equivalencies, that is, number of reading and math grades gained.

Comparison of Dolphin/non-Dolphin schools on related measures

The variables that measured factors (other than Dolphin/non-Dolphin) that could be related to the Chapter 1 effectiveness measures were for the most part derived from the responses of the survey participants. Questions concerning education and experience levels, participation in school activities, general approach to teaching, school problems, and the like, were asked of the school principal and the Chapter 1 and regular classroom teachers. Analyses of variance were used to compare the means of the Dolphin versus the non-Dolphin schools on these variables. For the case where there were separate values for each grade (i.e., the variables derived from the regular classroom teachers' responses), the analysis of variance also tested for grade differences in mean values and for any interaction between grade and Dolphin/non-Dolphin.

As a result of the analysis of variance, five of these related effectiveness variables were identified that had significant mean differences between the Dolphin and non-Dolphin schools. These variables and their means are given in Table B2.

Table B2

Selected Control Variables and Their Means

	DOLPHIN N=47	NON-DOLPHIN N=15	Significance
Principal Questionnaire			
Seriousness of school problems [a]	1.90	2.16	.047
Parent group activity level [b]	6.80	4.81	.020
Parent group contributions [c]	4.42	3.37	.051
Percent of student turnover	14.37	7.55	.035
Observation Checklist			
Chapter 1 class size [d]	18.59	13.15	.039

---

[a] Average of 6 items: 1=not at all, 2=minor, 3=moderate, 4=serious

[b] Sum of 5 items: range, 0=no group - 20=very active

[c] Sum of 7 items: range, 0=none - 7=all

[d] Each Dolphin class has an aide to compensate for larger class size.

As can be seen in the table, the principals at the non-Dolphin schools reported a higher degree of school problems, and principals at the Dolphin schools reported higher parent group activity levels, more parent group contributions to the school, and greater percentage of student turnover.

Also, Dolphin Chapter 1 classes were, on the average, significantly larger than the Chapter 1 classes in the non-Dolphin schools. However, each Dolphin class has an instructional aide assigned to it to compensate for a larger class size. As these variable differences offer possible alternative explanations for any differences among the Chapter 1 schools in program effectiveness, they would have to be statistically controlled for within comparisons of program effectiveness at the Dolphin and non-Dolphin schools.

Identification of promising process variables

The same kinds of considerations that led to the selection of the sample of the Chapter 1 program effectiveness measures, were used in selecting a subset of promising process variables to include in the stepwise multiple regression analyses. Factor analyses were performed on the potential process variables derived from the principal and teacher responses to the questionnaire items. These analyses helped identify variables from each source that were relatively independent from each other. However, the content of the variable, that is, what it was measuring, was the major determinant of whether it was included in the multivariate analyses. These variables and their means are given in Table B3. We tried to select variables that would contribute to explaining differences in program effectiveness across the Chapter 1 schools, after having controlled for differences among the schools on the control variables and Dolphin/non-Dolphin status.

Stepwise multiple regression analyses

The stepwise multiple regression analysis allowed one variable at a time to be entered into the equation that estimates the dependent (criterion) variable as a function of the entered independent variables. In the analysis for each criterion variable, the five control variables were entered first into the equation. These were followed (for the criteria with values by grade level) by two grade variables. The first grade variable was whether the grade was fourth, fifth, or sixth. If this variable entered into the equation with a significantly (at the .05 level) large positive weight, it would mean that higher values on the criterion measure were associated with the higher grades. A significant negative weight would indicate that higher criterion values were associated with the

Table B3

Selected Process Variables and Their Means *

	DOLPHIN	NON-DOLPHIN
Student Questionnaire [a]	N=138	N=37
Family has computer at home [b]	.44	.37
Student Records [a]	N=146	N=43
Percent of students that homeroom teacher instructs in reading	82.95	81.86
Percent of students that homeroom teacher instructs in math	87.89	84.69
Regular Teacher Questionnaire	N=136	N=41
Education level [c]	2.65	2.71
Years of experience as teacher	19.01	20.23
Number of other school roles [d]	1.13	1.10
Received at least one professional award [b]	.15	.24
Teaching approach is to give equal time and attention to all students [e]	2.37	2.36
Instructional method to have students obtain information by inferences, dealing with a lot of different materials [e]	2.49	2.27
Satisfaction with support received from Chapter 1 staff [b]	.44	.46
Chapter 1 Teacher Questionnaires	N=57	N=14
Education level [c]	3.53	3.71
Years of experience as teacher	21.54	20.14
Years at present school	6.40	4.86
Years experience in Chapter 1	10.60	9.93
Number of other school roles [d]	1.12	.82
Received at least one professional award [b]	.30	.36
Principal Questionnaire	N=47	N=14
Student participation level in available school activities [f]	16.83	14.75
Number of resource programs [g]	7.09	5.94
Percent of teacher turnover	3.05	2.75
Percent of media center use by regular teachers	78.11	78.08

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* None of the differences between Dolphin and non-Dolphin school means was significantly different at the .05 level.

[a] Average or mean student values within grade and within school used as process variables.

[b] Scale: 0=no, 1=yes

[c] Scale: 1= Bachelor's, 2=Bachelor's + 15, 3=Master's, 4=Master's + 30, 5=Master's +60, 6=Doctorate

[d] Sum of 7 yes/no items: range, 0=none - 7=all

[e] Scale: 1=third, 2=second, 3=first

[f] Sum of 11 scale items: scale, 0=none, 1=poor, 2=fair, 3=good; range, 0=none - 33=good

[g] Sum of 11 yes/no items: range, 0=none - 11=all

lower grades. The second grade variable was defined so that the fifth grade was equal to 1.0 and the fourth and sixth grades were each equal to zero. If this variable entered significantly into the equation, it would indicate that the fifth grade values on the dependent variable were higher (positive weight) or lower (negative weight) than those of the fourth and sixth grades; that is, the relationship between grade and criterion values tended to be curvilinear.

The next variable allowed into the multiple regression equation was the Dolphin/non-Dolphin variable, the key study variable. If it entered into the equation with a significant positive weight, it would indicate that higher values on the criterion variable were associated with the presence of Dolphin in the schools, after controlling for the effects of the previously entered variables. On the other hand, a significant negative weight would indicate that lower values on the criterion were associated with the presence of Dolphin in the Chapter 1 schools.

After the Dolphin/non-Dolphin variable entered the equation, the process variables were allowed to enter the equation. All process variables that satisfied the rule that their weights were significant at the .15 level were allowed to enter and remain in the equation. This significance level was chosen to limit the number of variables entering the equation, while at the same time allowing hypotheses to be examined concerning the relationship of the process variables with the measures of Chapter 1 program effectiveness.

Significance of criterion mean differences between Dolphin/non-Dolphin schools

The analyses of variance performed on the criterion variables were similar to those performed on related measures. [See Step 2] The analyses tested the significance of the mean differences between the Dolphin and non-Dolphin schools on each of the measures of Chapter 1 program effectiveness. The analyses also tested for significant differences among grade means and for any grade/Dolphin interaction effects.

These analyses did not control for differences between the Dolphin and non-Dolphin schools on the control variables. If, however, the Dolphin and non-Dolphin school means on a given criterion were found to be significantly different *and* the Dolphin/non-Dolphin variable entered the corresponding multiple regression equation significantly, then it would be somewhat safer to infer that there was a nonchance relationship between the presence/absence of Dolphin and the given criterion variable, than if significance was achieved on only one statistical test and not the other, or on neither.

Appendix C

Responses to Open-Ended Questions

The following pages contain the responses of Chapter 1 Dolphin teachers, Dolphin instructional aides, and regular classroom teachers to open-ended questions. A number in parentheses following an item indicates the frequency for a repeated response.

Chapter 1 Dolphin Teachers Responses to Open-Ended Questions

What feature(s) would like added to Dolphin

- -a guide which includes samples comparable to those given on skill review segment (4)
- -reading drill sheet; special progress report for math; eliminate split screens; shorten backup
- -special progress report in math; revise split screens (2)
- -greater spacing for longer stories
- -software for grades 2 & 3 (5)
- -programming (11)
- -larger print (4)
- -scanner
- -word processing
- -work reports in reading & drill sheets in reading (2)
- -teacher guide; answer key (3)
- -reading drill sheet; special progress report for math; eliminate split screens; shorten backup
- -a more descriptive report of student progress and improved directions for problem solving (3)
- -ability to produce drill sheets in reading
- -lower levels of reading (4)
- -revised manner of Chapter 1 implementation

[continued next column]

What feature(s) would like added to Dolphin

- -change reports so numbers are followed by brief description of math skill; add special progress report to math; shorten backup
- -automatic referral system
- -special progress report - math; teacher's guide in all four areas; printouts that include underlined materials when making hard copy
- -disk drive to provide additional learning experiences by using floppy disks & additional software including more reading & math CBC/SPP skills
- -clearer color monitor; practice sheets for comprehension
- -additional pay for CAI teachers
- -computer capable of talking to help 3rd graders with reading problems
- -more opportunity for students to program

What like most about Dolphin

- -all of it
- -correlation of software with CBC curricula
- -format/sequence of skills & clarity of activities
- -ease with which students involve themselves
- -easy to operate; correlated to CBC
- -Special Progress Report
- -independence for students
- -management system; user friendly; good math format
- -software design
- -user friendly
- -high interest - motivation
- -reinforcement aspects very good (3)
- -management system
- -immediate feedback (6)
- -drill & practice (5)
- -operation procedures
- -uniqueness is fascinating, thus students learn while enjoying themselves
- -reading/math programs
- -good learning device; students interested
- -format of math materials
- -hands-on experience

[continued next column]

What like most about Dolphin

- -individualization of assignments that wouldn't be possible without the system (4)
- -operation of system, little breakdown
- -curricula & reports (2)
- -record keeping abilities (3)
- -variety of instructional skills (2)
- -easy to use (3)
- -another method for assessing students
- -reports, drill sheets, skill review
- -new, exciting, non-threatening
- -extensive records for each student's progress; work at own pace; reports student progress quickly & effectively; improved student attendance

Chapter 1 Delphia Teachers Responses to Open-Ended Questions

What positive side effect from Delphia implementation

- -software 2 level
- -ample drill work for math computation skills
- -high interest level (6)
- -information they retain
- -enhanced self-concept & self-esteem (5)
- -student competiveness - to win over the computer
- -immediate feedback (4)
- -students do better job of mental computation
- -students/adults more computer minded (5)
- -reading and math; mastery achievement (2)
- -students self-confident with use of software (2)
- -student can be drilled & reinforced endlessly because of patience of computer
- -improvement of skills & behavior
- -attendance improved (2)
- -referral materials to match skills on terminal for math are good
- -very excited about their lab experience
- -Houghton Mifflin math materials

[continued next column]

What positive side effect from Delphia implementation

- -improved motivation & attitude (12)
- -realize need to practice & read more often; try harder during instruction to perform better on computers
- -positive reinforcement in math & reading skills
- -curriculum presented in different way
- -students enjoy working on computers & at their own pace; feedback from regular teachers is that students are progressing (2)
- -drill & practice activities & assimilation activities
- -growth made; are thrilled with computers - each one tries best to pass skills & have found learning more enjoyable
- -students see how important reading & following directions can be
- -sense of accomplishment
- -assists teacher with record keeping of students
- -another period to reinforce skills
- -nearly all students want to be in Chapter 1

What negative side effect from Delphia implementation

- -print is too small (4)
- -sometimes students do other work hurriedly & carelessly because feel won't get chance to have time on computer; time elements of tripod need revision; 15 min. for direct teaching is not always adequate
- -many wish to remain on terminal for longer periods creating temper problems, unhappy attitudes
- -students preconditioned to see computer as games
- -having to listen to hum of computer all day & watching screen
- -too many skills aren't correlated with CBC; are beyond skill level listed under CBC
- -no major complaints (6)
- -as set up by Chapter 1, isn't enough time to remediate 80 students in 2 subject areas; number should be halved & planning time included
- -are students who want to come but aren't identified
- -become lazy about written work
- -generation of same materials when not mastered

[continued next column]

What negative side effect from Delphia implementation

- -not enough preparation time for use of computer
- -teachers need curriculum guide of software in reading & math
- -lack of interest in direct teaching & writing
- -students play with set-up button
- -only when language is too hard & students get frustrated
- -referral materials to match skills on terminal for reading
- -time for student-teacher exchange is shortened
- -computer is heartless

Chapter 1 Dolphin Teachers Responses to Open-Ended Questions

Special problems entering lesson information

- -software reading program lacks sufficient practice exercises for many skills
- -unavailability of some skills that correlate with SPP checklist & student needs (2)
- -sometimes students can't figure out answers; computer sometimes checks answers wrong when correct; students get frustrated & keep bying out
- -vocabulary
- -few problems because can preview before assigning
- -correlation with CBC skills too advanced
- -not enough time allowed to enter lesson information, thus, I tend to enter too many skills
- -"block" no room on terminal for this student
- -problem entering some math skills

[continued next column]

Special problems entering lesson information

- -math numbers too long; automatically assigns; runs too long - would be better if auto assign covered only one skill (2)
- -correlation in math does not match CBC/SPP code; hardcover of math materials needs to be given to teachers due to lack of planning time
- -time is a special problem when trying to assign individual skills
- -amount of time it takes to enter information for 80 students on daily basis is an almost impossible task
- -none (16)

Procedure to monitor student Dolphin progress

- -observing while students working; checking work report from screen
- -check student reading directions before begin work; if needs help, note is made so appropriate help can be given
- -initiate lesson after direct teaching; observe student take posttest if indicated; give teacher-made test on same
- -activity sheet; aide observes; aide maintains record; referral sheets
- -aide monitors program (4)
- -students keep individual records (2)
- -aide records screen messages
- -students asked if having difficulty; observe them at terminals; run report; worksheet containing correct skill being worked on
- -usually use monitor stage to check on progress; computer reports give feedback
- -aide monitors & assists students at terminals; if concern arises teacher may provide support or remove student for more direct instruction

[continued next column]

Procedure to monitor student Dolphin progress

- -teacher-made monitoring sheet where students record scores after completing assignments; run drill sheet report
- -made a sheet where students list skill working on .
- -observe; students ask for help; run drill sheet report
- -check assignment status report
- -check work reports weekly; check log of students needing help - kept by aide who monitors daily
- -aide monitors; if I have time I assist
- -walk around & check progress (4)
- -student tells when comes to posttest & if pass; if not, gets skill review or more direct instruction
- -run work report on screen at least every other day; run survey alert; reassign skills not mastered or ones needed for review
- -too lengthy to explain

Chapter 1 Dolphin Teachers Responses to Open-Ended Questions

Activities used in Independent Learning component of Learning Tripod

- -games, puzzles, independent reading, learning packages/kits, worksheets, workbooks, chart work, boardwork (18)
- -listening station, tape recorder, filmstrips, films, manipulatives (5)
- -combination of above two categories (21)
- -activities for implementing CBC skills & check for mastery (4)

Reason for Dolphin down-time

- -computer failure or part breakdown (13)
- -heat in the room (5)
- -locked or problem with terminals (3)
- -software problem (3)
- -unknown/undetermined (4)

Alternative activities during down-time

- -use Direct Instruction component (13)
- -use Independent Learning component activities (9)
- -use both other components (19)
- -teacher & students work together/ have discussions (2)
- -whole group activity (1)
- -use other computer system in our building (1)
- -read about computer history & use filmstrips (1)

Dolphin Aides Responses to Open-Ended Questions

What feature(s) would like added to Dolphin	What like most about Dolphin	What like most about Dolphin	What positive side effect from Dolphin implementation
-programming (6) -spelling in some form -books, materials, teacher's guide -larger print on screen (5) -written instruction that can be reviewed -lowered reading levels -teacher's guide -skills for grades 7-12 -more off-line material to go with referrals -graphics & color; games at end of lesson as reward -spelling, phonics; I like the system & would like more training in programming -prefer an unprogrammed unit -teacher should be able to put in lesson of choice for individual student	-children able to work on their own at own pace (2) computer repeats a skill until mastery -practice & posttests -easy to use by students (4) -instruction for using system -to assist students with their work - to see & explain as they work -very effective method of instruction; enables students to work independently; contributes to great concentration -opportunity to experience system -the software; material very informative -great deal of information in system (or can be) that child doesn't have in class -Dolphin lessons -usefulness of system -students can feel independent but if need help, it's there -enjoy using & are making progress -all features (2)	-allows different approach to teaching; more time for individualization -diversion from paper & pencil -holds attention -gives extra help in mastering a good education -one to one relationship between student & Dolphin (personalized instruction) -worksheets, reports, & skills -student participation -challenge to work independently on well-designed skills (lessons) -all features -checking on progress; keeps records	-students able to advance if goals & interests are attained -have to concentrate & read carefully - directions -feel students eager to learn more (2) -enjoy working on terminals, but would like fun-to-do lessons -curbs bad behavior, so are more attentive in regular class in order to come to lab -student interest -students enjoy learning at own pace -introduction of computers to students -enjoy working on computer even when having difficulty -good test results -high motivation (3) -enjoy coming to lab -raised self-confidence, self-esteem of students which motivates positive attitude about attendance

[continued next column]

Delphia Aides Responses to Open-Ended Questions

What negative side effect from Delphia implementation

-if students can be taught computer is not a toy
-print too small in some activities
-can become boring & frustrating because repitition of assignments
-some inclined to cheat, but can't on terminals
-problem reading print on screen
-not enough time to survey skills & have students do them, too
-reluctant to return to paperwork
-can't input my own skills to help 3rd graders
-students feel don't have enough time
-print is too small (paragraph reading)

Special problems entering lesson information

-some students can't read well enough to understand lesson
-sometimes terminals jam or lock
-none so far

Procedure to monitor student Delphia progress

-profiles
-check each student daily; I know what students are doing what
-being aware of each student's weaknesses & helping him/her to the fullest
-stand/sit with them until I'm sure they understand what's before them reassure their confidence
-run a work report; monitor while on terminals; clarify directions; allow pretest, if failure, assist with practice activities, then allow independent posttest
-make sure doesn't stay on a skill more than 3 entries; check understanding of directions; document problems;
-help read directions; explain meanings of words; refer to resource material for help
-be sure students understand directions & words
-watch to see if doing correctly, if not, instruct them in correct procedure
-run student status report
-have monitoring record - I keep number times repeated skill, unable to read directions, screen messages

[continued next column]

Procedure to monitor student Delphia progress

-check sign-in sheet on each terminal; student enters information
-answer questions, pronouce words, listen to reading; a checklist
-ask questions about lesson; timing students
-observe number times repeat a skill; listen to student read directions; students to ask for help
-observation of students at terminals (5)
-run progress check after each class (2)
-instruct students to read skill name; define skill; motivate to apply every previously learned skill; encourage to read for comprehension
-check each student - number times repeated a skill; encourage them to think before pushing buttons

Regular Classroom Teachers Responses to Open-Ended Questions

What reasons do students who do not attend Chapter 1 program give for wanting to be part of the program?

DOLPHIN	NON-DOLPHIN
1. to work with the computers (62)	1. want to do the Chapter 1 activities (3)
2. to use computers to improve skills or achievement scores (4)	2. desire to read & write better; improve math skills (4)
3. to improve skills &/or scores (4)	3. variety of learning,books,activities (2)
4. more individualized instruction (1)	4. more individualized instruction (3)
5. to be with classmates (1)	5. to visit the other teacher's room (1)
6. like positive reinforcement in STARS and want to participate (1)	6. to get out of regular class work (1)
7. to work with an aide daily (1)	7. like the Chapter 1 teacher (1)
8. the fun of learning in the lab (1)	8. all students go to Chapter 1 at different periods (1)
9. to "play" with the computer (1)	9. unknown (1)
10. feel they should receive the same services as other children (2)	

What reasons do students who do attend Chapter 1 program give for not wanting to be part of the program?

1. tired, bored, disinterested (3)	1. tired, bored, disinterested (3)
2. feel they are being labeled "slow" (2)	2. feel they are being labeled "slow" (2)
3. missing out on regular class work (6)	3. missing out on regular class work (3)
4. they aren't doing anything in Chapter 1 class (2)	4. negative behavior displayed by some students (1)
5. don't wish to go (3)	5. don't want to do the assigned Chapter 1 work (2)
6. dislike teacher; teacher mean; personality conflict (1)	6. dislike teacher; teacher mean; personality conflict (3)
7. frustrated - can't finish work by deadline imposed upon them (1)	

Chapter 1 Dolphin Teachers Rankings of Curricula Reports *

List the three most and least useful Curricula Reports for:

...planning and revising instructional materials.

Most Useful N=44		Least Useful N=31	
1. Work Report	(19)	1. Skill History Report	(6)
2. Assignment Status Report	(7)	2. Assignment Status Report	(4)
3. Special Progress Report	(7)	3. Skill List Report	(3)
		Survey Statistics Report	(3)
		Strand Report	(3)
		Skills Profile Report	(3)

...providing information for record keeping.

Most Useful N=41		Least Useful N=23	
1. Work Report	(18)	1. Skill List Report	(4)
2. Master List	(6)	2. Skill History Report	(4)
3. Special Progress Report	(5)	3. Current Assignment Report	(3)
		Survey Statistics Report	(3)

...providing information for collaboration conference.

Most Useful N=45		Least Useful N=25	
1. Work Report	(18)	1. Skill History Report	(6)
2. Special Progress Report	(14)	2. Current Assignment Report	(3)
3. Assignment Status Report	(6)	Assignment Status Report	(3)
		Survey Report	(3)
		Drill Sheet Report	(3)

...monitoring student progress.

Most Useful N=43		Least Useful N=21	
1. Work Report	(16)	1. Current Assignment Report	(3)
2. Special Progress Report	(10)	Skill History Report	(3)
Assignment Status Report	(10)	3. Assignment Status Report	(2)
		Enrollment List	(2)
		Survey Statistics Report	(2)
		Strand Report	(2)
		Drill Sheet Report	(2)

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* Reported by frequencies rather than proportions due to changing N.
Chapter 1 aides received identical questions based on the understanding that they also used the Curricula Reports; however, it was learned during data collection that this is rarely true. Consequently, there was a very low response rate to these items.

References

Lord, F.M. (1967). Elementary models for measuring change. In C.W. Harris (Ed.), *Problems in measuring change: Proceedings of a conference sponsored by the Committee on Personality Development in Youth of the Social Science Research Council, 1962* (pp. 21-38). Madison, WI: The University of Wisconsin Press.